**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

| APPLICATION FOR PERMIT TO DRILL | | 1. WELL NAME and NUMBER: Bonanza 1023-6N1CS |
|---|---|---|
| 2. TYPE OF WORK: DRILL NEW WELL (●) REENTER P&A WELL ( ) DEEPEN WELL ( ) | | 3. FIELD OR WILDCAT: NATURAL BUTTES |
| 4. TYPE OF WELL: Gas Well Coalbed Methane Well: NO | | 5. UNIT or COMMUNITIZATION AGREEMENT NAME |
| 6. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. | | 7. OPERATOR PHONE: 720 929-6587 |
| 8. ADDRESS OF OPERATOR: P.O. Box 173779, Denver, CO, 80217 | | 9. OPERATOR E-MAIL: mary.mondragon@anadarko.com |
| 10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE): UTU 38419 | 11. MINERAL OWNERSHIP: FEDERAL (●) INDIAN ( ) STATE ( ) FEE ( ) | 12. SURFACE OWNERSHIP: FEDERAL (●) INDIAN ( ) STATE ( ) FEE ( ) |
| 13. NAME OF SURFACE OWNER (if box 12 = 'fee') | | 14. SURFACE OWNER PHONE (if box 12 = 'fee') |
| 15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') | | 16. SURFACE OWNER E-MAIL (if box 12 = 'fee') |
| 17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') | 18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS: YES (●) (Submit Commingling Application) NO ( ) | 19. SLANT: VERTICAL ( ) DIRECTIONAL (●) HORIZONTAL ( ) |

| 20. LOCATION OF WELL | FOOTAGES | QTR-QTR | SECTION | TOWNSHIP | RANGE | MERIDIAN |
|---|---|---|---|---|---|---|
| LOCATION AT SURFACE | 1550 FSL 739 FWL | NWSW | 6 | 10.0 S | 23.0 E | S |
| Top of Uppermost Producing Zone | 955 FSL 2145 FWL | SESW | 6 | 10.0 S | 23.0 E | S |
| At Total Depth | 955 FSL 2145 FWL | SESW | 6 | 10.0 S | 23.0 E | S |

| 21. COUNTY | 22. DISTANCE TO NEAREST LEASE LINE (Feet) | 23. NUMBER OF ACRES IN DRILLING UNIT |
|---|---|---|
| UINTAH | 955 | 516 |
| | 25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed): 350 | 26. PROPOSED DEPTH: MD: 8840 TVD: 8400 |
| 27. ELEVATION - GROUND LEVEL: 5144 | 28. BOND NUMBER: WYB000291 | 29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE: Permit #43-8496 |

**ATTACHMENTS**

**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

| | |
|---|---|
| ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | ☑ COMPLETE DRILLING PLAN |
| ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE) | ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER |
| ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED) | ☑ TOPOGRAPHICAL MAP |

| NAME: Danielle Piernot | TITLE: Regulatory Analyst | PHONE: 720 929-6156 |
|---|---|---|
| SIGNATURE | DATE: 06/01/2009 | EMAIL: danielle.piernot@anadarko.com |

| API NUMBER ASSIGNED | APPROVAL |
|---|---|
| 43047504540000 | Permit Manager |

| Proposed Hole, Casing, and Cement | | | | | | |
|---|---|---|---|---|---|---|
| **String** | **Hole Size** | **Casing Size** | **Top (MD)** | **Bottom (MD)** | | |
| Prod | 7.875 | 4.5 | 0 | 8840 | | |
| **Pipe** | **Grade** | **Length** | **Weight** | | | |
| | Grade I-80 LT&C | 8840 | 11.6 | | | |
| | | | | | | |

| Proposed Hole, Casing, and Cement | | | | | | |
|---|---|---|---|---|---|---|
| **String** | **Hole Size** | **Casing Size** | **Top (MD)** | **Bottom (MD)** | | |
| Surf | 12.25 | 9.625 | 0 | 2080 | | |
| **Pipe** | **Grade** | **Length** | **Weight** | | | |
| | Grade J-55 LT&C | 2080 | 36.0 | | | |
| | | | | | | |

# Kerr–McGee Oil & Gas Onshore LP

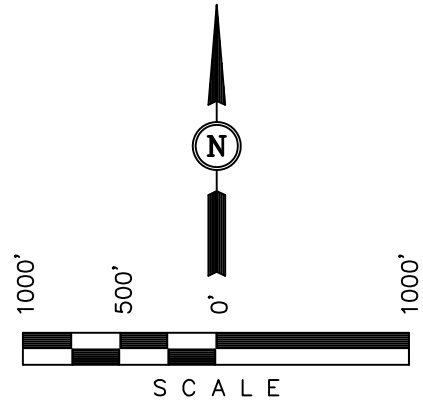
Well location, BONANZA #1023–6N1CS, located as shown in LOT 6 of Section 6, T10S, R23E, S.L.B.&M., Uintah County, Utah.

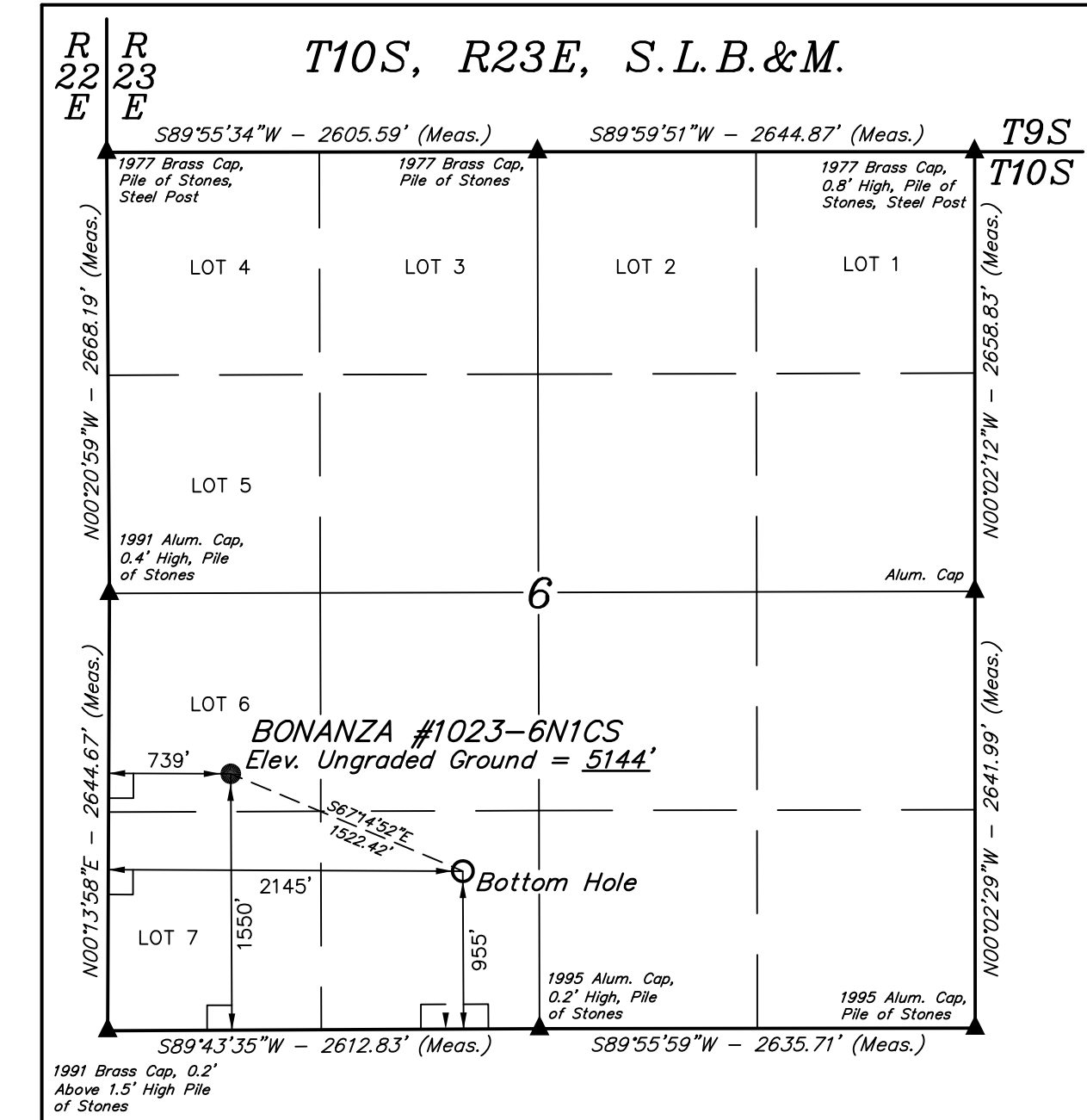
## BASIS OF ELEVATION

BENCH MARK 58 EAM (1965) LOCATED IN THE NE 1/4 OF SECTION 30, T9S, R23E, S.L.B.&M. TAKEN FROM THE RED WASH SE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5132 FEET.

## BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.




## CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REVISED: 12–31–08 L.K.

## LEGEND:

- ∟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

| NAD 83 (TARGET BOTTOM HOLE) | NAD 83 (SURFACE LOCATION) |
|---|---|
| LATITUDE = 39°58'23.88" (39.973300) | LATITUDE = 39°58'29.69" (39.974914) |
| LONGITUDE = 109°22'16.23" (109.371175) | LONGITUDE = 109°22'34.26" (109.376183) |
| **NAD 27 (TARGET BOTTOM HOLE)** | **NAD 27 (SURFACE LOCATION)** |
| LATITUDE = 39°58'24.00" (39.973333) | LATITUDE = 39°58'29.81" (39.974947) |
| LONGITUDE = 109°22'13.78" (109.370494) | LONGITUDE = 109°22'31.81" (109.375503) |


**UINTAH ENGINEERING & LAND SURVEYING**
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789–1017


| SCALE | DATE SURVEYED: | DATE DRAWN: |
|---|---|---|
| 1" = 1000' | 10–16–08 | 10–29–08 |
| **PARTY** | **REFERENCES** | |
| B.B. T.B. C.C. | G.L.O. PLAT | |
| **WEATHER** | **FILE** | |
| COOL | Kerr–McGee Oil & Gas Onshore LP | |

'APIWellNo:43047504540000'

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT NAD27
Site: Bonanza 1023-6L Pad
Well: Bonanza 1023-6N1CS
Wellbore: OH
Design: Plan #1

# Kerr McGee Oil and Gas Onshore LP

T M

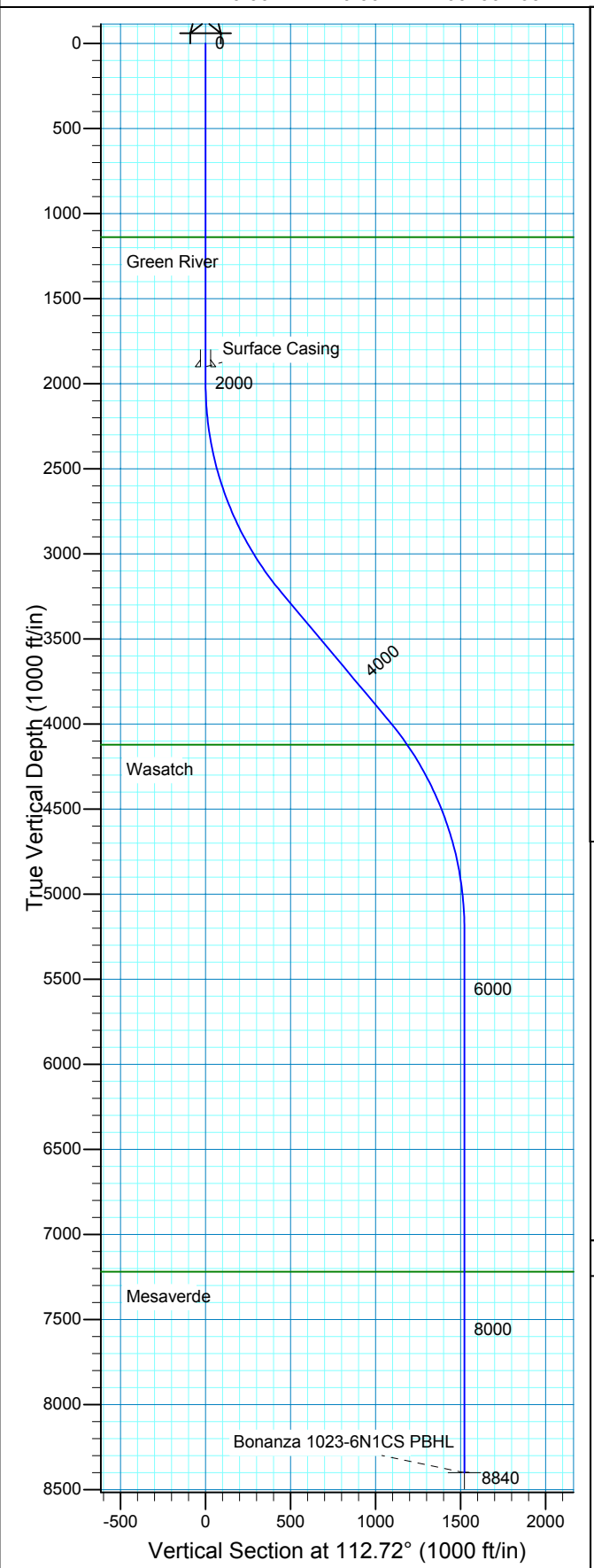
Azimuths to True North
Magnetic North: 11.31°

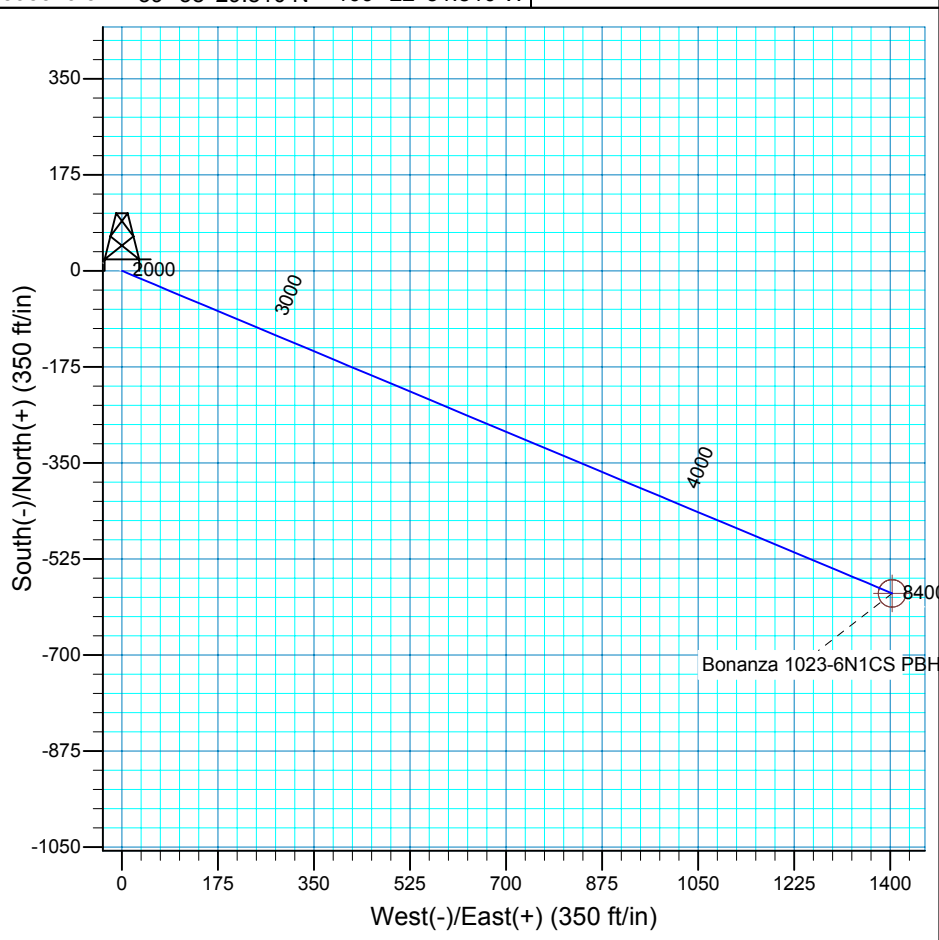
Magnetic Field
Strength: 52637.4snT
Dip Angle: 65.94°
Date: 2009/01/21
Model: IGRF2005-10

WELL DETAILS: Bonanza 1023-6N1CS

GL 5144' & RKB 18' @ 5162.00ft 5144.00

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 604991.65 | 2595329.37 | 39° 58' 29.810 N | 109° 22' 31.810 W |




Plan: Plan #1 (Bonanza 1023-6N1CS/OH)

Created By: Julie Cruse Date: 2009-01-22

PROJECT DETAILS: Uintah County, UT NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302
Location: Sec 6 T10S R23E
System Datum: Mean Sea Level
Local North: True

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2000.00 | 0.00 | 0.00 | 2000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3333.33 | 40.00 | 112.72 | 3227.63 | -172.60 | 412.14 | 3.00 | 112.72 | 446.82 | |
| 4310.43 | 40.00 | 112.72 | 3976.13 | -415.20 | 991.46 | 0.00 | 0.00 | 1074.89 | |
| 5643.76 | 0.00 | 0.00 | 5203.76 | -587.80 | 1403.60 | 3.00 | 180.00 | 1521.71 | |
| 8840.00 | 0.00 | 0.00 | 8400.00 | -587.80 | 1403.60 | 0.00 | 0.00 | 1521.71 | Bonanza 1023-6N1CS PBHL |

'APIWellNo:43047504540000'

Scientific Drilling
Rocky Mountain Operations

# Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT NAD27**
**Bonanza 1023-6L Pad**
**Bonanza 1023-6N1CS**
**OH**

**Plan: Plan #1**

# Standard Planning Report

**22 January, 2009**

Scientific Drilling
Rocky Mountain Operations

# Scientific Drilling
## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Multi User DB | **Local Co-ordinate Reference:** | Well Bonanza 1023-6N1CS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Project:** | Uintah County, UT NAD27 | **MD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Site:** | Bonanza 1023-6L Pad | **North Reference:** | True |
| **Well:** | Bonanza 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan #1 | | |

**Project** Uintah County, UT NAD27

| | | | |
|---|---|---|---|
| **Map System:** | US State Plane 1927 (Exact solution) | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | Utah Central 4302 | | |

**Site** Bonanza 1023-6L Pad, Sec 6 T10S R23E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 605,076.57 ft | **Latitude:** | 39° 58' 30.640 N |
| **From:** | Lat/Long | **Easting:** | 2,595,367.85 ft | **Longitude:** | 109° 22' 31.290 W |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | in | **Grid Convergence:** | 1.36 ° |

**Well** Bonanza 1023-6N1CS, 1550' FSL 739' FWL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 604,991.65 ft | **Latitude:** | 39° 58' 29.810 N |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,595,329.37 ft | **Longitude:** | 109° 22' 31.810 W |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,144.00 ft |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2005-10 | 2009/01/21 | 11.31 | 65.94 | 52,637 |

**Design** Plan #1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 112.72 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,333.33 | 40.00 | 112.72 | 3,227.63 | -172.60 | 412.14 | 3.00 | 3.00 | 0.00 | 112.72 | |
| 4,310.43 | 40.00 | 112.72 | 3,976.13 | -415.20 | 991.46 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,643.76 | 0.00 | 0.00 | 5,203.76 | -587.80 | 1,403.60 | 3.00 | -3.00 | 0.00 | 180.00 | |
| 8,840.00 | 0.00 | 0.00 | 8,400.00 | -587.80 | 1,403.60 | 0.00 | 0.00 | 0.00 | 0.00 | Bonanza 1023-6N1CS |

Scientific Drilling
Rocky Mountain Operations

# Scientific Drilling
## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Multi User DB | **Local Co-ordinate Reference:** | Well Bonanza 1023-6N1CS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Project:** | Uintah County, UT NAD27 | **MD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Site:** | Bonanza 1023-6L Pad | **North Reference:** | True |
| **Well:** | Bonanza 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,138.00 | 0.00 | 0.00 | 1,138.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Green River** | | | | | | | | | |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Surface Casing** | | | | | | | | | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 3.00 | 112.72 | 2,099.95 | -1.01 | 2.41 | 2.62 | 3.00 | 3.00 | 0.00 |
| 2,200.00 | 6.00 | 112.72 | 2,199.63 | -4.04 | 9.65 | 10.46 | 3.00 | 3.00 | 0.00 |
| 2,300.00 | 9.00 | 112.72 | 2,298.77 | -9.08 | 21.69 | 23.51 | 3.00 | 3.00 | 0.00 |
| 2,400.00 | 12.00 | 112.72 | 2,397.08 | -16.12 | 38.50 | 41.74 | 3.00 | 3.00 | 0.00 |
| 2,500.00 | 15.00 | 112.72 | 2,494.31 | -25.14 | 60.03 | 65.08 | 3.00 | 3.00 | 0.00 |
| 2,600.00 | 18.00 | 112.72 | 2,590.18 | -36.11 | 86.22 | 93.48 | 3.00 | 3.00 | 0.00 |
| 2,700.00 | 21.00 | 112.72 | 2,684.43 | -49.00 | 117.01 | 126.85 | 3.00 | 3.00 | 0.00 |
| 2,800.00 | 24.00 | 112.72 | 2,776.81 | -63.78 | 152.30 | 165.12 | 3.00 | 3.00 | 0.00 |
| 2,900.00 | 27.00 | 112.72 | 2,867.06 | -80.41 | 192.01 | 208.16 | 3.00 | 3.00 | 0.00 |
| 3,000.00 | 30.00 | 112.72 | 2,954.93 | -98.84 | 236.01 | 255.87 | 3.00 | 3.00 | 0.00 |
| 3,100.00 | 33.00 | 112.72 | 3,040.18 | -119.02 | 284.20 | 308.12 | 3.00 | 3.00 | 0.00 |
| 3,200.00 | 36.00 | 112.72 | 3,122.59 | -140.89 | 336.44 | 364.75 | 3.00 | 3.00 | 0.00 |
| 3,300.00 | 39.00 | 112.72 | 3,201.91 | -164.41 | 392.58 | 425.62 | 3.00 | 3.00 | 0.00 |
| 3,333.33 | 40.00 | 112.72 | 3,227.63 | -172.60 | 412.14 | 446.82 | 3.00 | 3.00 | 0.00 |
| 3,400.00 | 40.00 | 112.72 | 3,278.70 | -189.15 | 451.67 | 489.67 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 40.00 | 112.72 | 3,355.31 | -213.98 | 510.96 | 553.95 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 40.00 | 112.72 | 3,431.91 | -238.81 | 570.25 | 618.23 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 40.00 | 112.72 | 3,508.52 | -263.64 | 629.54 | 682.51 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 40.00 | 112.72 | 3,585.12 | -288.47 | 688.83 | 746.79 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 40.00 | 112.72 | 3,661.73 | -313.30 | 748.12 | 811.07 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 40.00 | 112.72 | 3,738.33 | -338.13 | 807.41 | 875.35 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 40.00 | 112.72 | 3,814.93 | -362.96 | 866.70 | 939.63 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 40.00 | 112.72 | 3,891.54 | -387.78 | 925.98 | 1,003.90 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 40.00 | 112.72 | 3,968.14 | -412.61 | 985.27 | 1,068.18 | 0.00 | 0.00 | 0.00 |
| 4,310.43 | 40.00 | 112.72 | 3,976.13 | -415.20 | 991.46 | 1,074.89 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 37.31 | 112.72 | 4,046.07 | -436.81 | 1,043.06 | 1,130.83 | 3.00 | -3.00 | 0.00 |
| 4,493.75 | 34.50 | 112.72 | 4,122.00 | -458.05 | 1,093.77 | 1,185.81 | 3.00 | -3.00 | 0.00 |
| **Wasatch** | | | | | | | | | |
| 4,500.00 | 34.31 | 112.72 | 4,127.16 | -459.41 | 1,097.03 | 1,189.34 | 3.00 | -3.00 | 0.00 |

Scientific Drilling
Rocky Mountain Operations

# Scientific Drilling
## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Multi User DB | **Local Co-ordinate Reference:** | Well Bonanza 1023-6N1CS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Project:** | Uintah County, UT NAD27 | **MD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Site:** | Bonanza 1023-6L Pad | **North Reference:** | True |
| **Well:** | Bonanza 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,600.00 | 31.31 | 112.72 | 4,211.19 | -480.34 | 1,147.00 | 1,243.52 | 3.00 | -3.00 | 0.00 |
| 4,700.00 | 28.31 | 112.72 | 4,297.95 | -499.55 | 1,192.86 | 1,293.23 | 3.00 | -3.00 | 0.00 |
| 4,800.00 | 25.31 | 112.72 | 4,387.19 | -516.97 | 1,234.46 | 1,338.34 | 3.00 | -3.00 | 0.00 |
| 4,900.00 | 22.31 | 112.72 | 4,478.66 | -532.56 | 1,271.70 | 1,378.71 | 3.00 | -3.00 | 0.00 |
| 5,000.00 | 19.31 | 112.72 | 4,572.13 | -546.29 | 1,304.47 | 1,414.23 | 3.00 | -3.00 | 0.00 |
| 5,100.00 | 16.31 | 112.72 | 4,667.32 | -558.10 | 1,332.68 | 1,444.82 | 3.00 | -3.00 | 0.00 |
| 5,200.00 | 13.31 | 112.72 | 4,763.99 | -567.97 | 1,356.26 | 1,470.38 | 3.00 | -3.00 | 0.00 |
| 5,300.00 | 10.31 | 112.72 | 4,861.86 | -575.88 | 1,375.14 | 1,490.85 | 3.00 | -3.00 | 0.00 |
| 5,400.00 | 7.31 | 112.72 | 4,960.67 | -581.80 | 1,389.27 | 1,506.17 | 3.00 | -3.00 | 0.00 |
| 5,500.00 | 4.31 | 112.72 | 5,060.14 | -585.71 | 1,398.61 | 1,516.30 | 3.00 | -3.00 | 0.00 |
| 5,600.00 | 1.31 | 112.72 | 5,160.01 | -587.61 | 1,403.13 | 1,521.21 | 3.00 | -3.00 | 0.00 |
| 5,643.76 | 0.00 | 0.00 | 5,203.76 | -587.80 | 1,403.60 | 1,521.71 | 3.00 | -3.00 | -257.60 |
| 5,700.00 | 0.00 | 0.00 | 5,260.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,360.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,460.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,560.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 5,660.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 5,760.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 5,860.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 5,960.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,060.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,160.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,260.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,360.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,460.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,560.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 6,660.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 6,760.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 6,860.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 6,960.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,060.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,160.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,659.00 | 0.00 | 0.00 | 7,219.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| **Mesaverde** | | | | | | | | | |
| 7,700.00 | 0.00 | 0.00 | 7,260.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,360.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,460.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,560.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 7,660.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 7,760.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 7,860.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 7,960.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,060.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 0.00 | 0.00 | 8,160.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,260.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 0.00 | 0.00 | 8,360.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |
| 8,840.00 | 0.00 | 0.00 | 8,400.00 | -587.80 | 1,403.60 | 1,521.71 | 0.00 | 0.00 | 0.00 |

Scientific Drilling
Rocky Mountain Operations

# Scientific Drilling
## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 2003.16 Multi User DB | **Local Co-ordinate Reference:** | Well Bonanza 1023-6N1CS |
| **Company:** | Kerr McGee Oil and Gas Onshore LP | **TVD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Project:** | Uintah County, UT NAD27 | **MD Reference:** | GL 5144' & RKB 18' @ 5162.00ft |
| **Site:** | Bonanza 1023-6L Pad | **North Reference:** | True |
| **Well:** | Bonanza 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan #1 | | |

**Targets**

| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| Bonanza 1023-6N1CS F<br>- plan hits target center<br>- Circle (radius 25.00) | 0.00 | 0.00 | 8,400.00 | -587.80 | 1,403.60 | 604,437.35 | 2,596,746.53 | 39° 58' 24.000 N | 109° 22' 13.780 W |

**Casing Points**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 1,900.00 | 1,900.00 | Surface Casing | 9.625 | 13.500 |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,138.00 | 1,138.00 | Green River | | 0.00 | |
| 4,493.75 | 4,122.00 | Wasatch | | 0.00 | |
| 7,659.00 | 7,219.00 | Mesaverde | | 0.00 | |

**Bonanza 1023-6N1CS**
Pad: Bonanza 1023-6L
Surface: 1,550' FSL, 739' FWL (NW/4SW/4) Lot 6
BHL: 955' FSL 2,145' FWL (SE/4SW/4)
Sec. 6 T10S R23E

Uintah, Utah
Mineral Lease: UTU 38419

# ONSHORE ORDER NO. 1

## *DRILLING PROGRAM*

**1. – 2. Estimated Tops of Important Geologic Markers:**
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

| Formation | Depth | Resource |
|---|---|---|
| Uinta | 0 – Surface | |
| Green River | 1,138' | |
| Birds Nest | 1,375' | Water |
| Mahogany | 1,877' | Water |
| Wasatch | 4,122' | Gas |
| Mesaverde | 6,276' | Gas |
| MVU2 | 7,219' | Gas |
| MVL1 | 7,778' | Gas |
| TVD | 8,400' | |
| TD | 8,840' | |

**3. Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

**4. Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

**5. Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

**6. Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 8,840' TD, approximately equals 4,972 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,124 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*
*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

***Variance for BOPE Requirements***
*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

***Variance for Mud Material Requirements***
*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

***Variance for Special Drilling Operation (surface equipment placement) Requirements***
*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***
*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

**10. Other Information:**

*Please refer to the attached Drilling Program.*

'APIWellNo:43047504540000'

# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | | | DATE | May 27, 2009 | | |
| WELL NAME | **Bonanza 1023-6N1CS** | | | TD | 8,400' | TVD | 8,840' MD |
| FIELD | Natural Buttes | COUNTY | Uintah | STATE | Utah | ELEVATION | 5,144' GL KB 5,159' |
| SURFACE LOCATION | NW/4 SW/4 | 1,550' FSL | 739' FWL | Sec 6 | T 10S | R 23E | Lot 6 |
| | Latitude: | 39.974914 | Longitude: | -109.376183 | | | NAD 83 |
| BTM HOLE LOCATION | SE/4 SW/4 | 955' FSL | 2,145' FWL | Sec 6 | T 10S | R 23E | |
| | Latitude: | 39.973300 | Longitude: | -109.371175 | | | NAD 83 |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde | | | | | | |
| ADDITIONAL INFO | Regulatory Agencies: BLM (Minerals), BLM (Surface), Tri-County Health Dept. | | | | | | |

| GEOLOGICAL | | | MECHANICAL | | |
|---|---|---|---|---|---|
| LOGS | FORMATION TOPS | DEPTH | HOLE SIZE | CASING SIZE | MUD WEIGHT |
| | | 20' | | 14" | |
| | | | 12-1/4" | 9-5/8", 36#, J-55, LTC | Air mist |

**All water flows encountered while drilling will be reported to the appropriate agencies.**

**Green River @ 1,138'**

**Top of Birds Nest @ 1,375**

**Mahogany @ 1,877**

**Preset f/ GL @ 2,080' MD**

Note: 12.25" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

**Wasatch @ 4,122'**

Mud logging program TBD

Cased hole logging program from TD - surf csg

**Mverde @ 6,276' TVD**

**MVU2 @ 7,219' TVD**

**MVU1 @ 7,778' TVD**

| | | | | |
|---|---|---|---|---|
| | | 7-7/8" | 4-1/2" 11.6# I-80 or equivalent LTC csg | Water / Fresh Water Mud 8.3-11.6 ppg |

Max anticipated Mud required 11.6 ppg

**TD @ 8,400' TVD 8,840' MD**

'APIWellNo:43047504540000'

# KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

## CASING PROGRAM

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | TENSION |
|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | |
| | | | | | | | | 3520 | 2020 | 453000 |
| SURFACE | 9-5/8" | 0 | to | 2,080 | 36.00 | J-55 | LTC | 1.04 | 2.08 | 7.70 |
| | | | | | | | | 7,780 | 6,350 | 201,000 |
| PRODUCTION | 4-1/2" | 0 | to | 8,840 | 11.60 | I-80 | LTC | 2.42 | 1.25 | 2.25 |

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
**MASP 3,124 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
**MABHP 4,972 psi**

## CEMENT PROGRAM

| | | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | YIELD |
|---|---|---|---|---|---|---|---|
| SURFACE | LEAD | 500 | Premium cmt + 2% CaCl | 215 | 60% | 15.60 | 1.18 |
| **Option 1** | | | + 0.25 pps flocele | | | | |
| | TOP OUT CMT (1) | 200 | 20 gals sodium silicate + Premium cmt | 50 | | 15.60 | 1.18 |
| | | | + 2% CaCl + 0.25 pps flocele | | | | |
| | TOP OUT CMT (2) | as required | Premium cmt + 2% CaCl | as req. | | 15.60 | 1.18 |
| SURFACE | | **NOTE: If well will circulate water to surface, option 2 will be utilized** | | | | | |
| **Option 2** | LEAD | 1500 | 65/35 Poz + 6% Gel + 10 pps gilsonite | 360 | 35% | 12.60 | 1.81 |
| | | | +.25 pps Flocele + 3% salt BWOW | | | | |
| | TAIL | 500 | Premium cmt + 2% CaCl | 180 | 35% | 15.60 | 1.18 |
| | | | + 0.25 pps flocele | | | | |
| | TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.60 | 1.18 |
| PRODUCTION | LEAD | 3,620' | Premium Lite II + 3% KCl + 0.25 pps | 340 | 40% | 11.00 | 3.38 |
| | | | celloflake + 5 pps gilsonite + 10% gel | | | | |
| | | | + 0.5% extender | | | | |
| | TAIL | 5,220' | 50/50 Poz/G + 10% salt + 2% gel | 1280 | 40% | 14.30 | 1.31 |
| | | | +.1% R-3 | | | | |

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

| | |
|---|---|
| SURFACE | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used. |

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

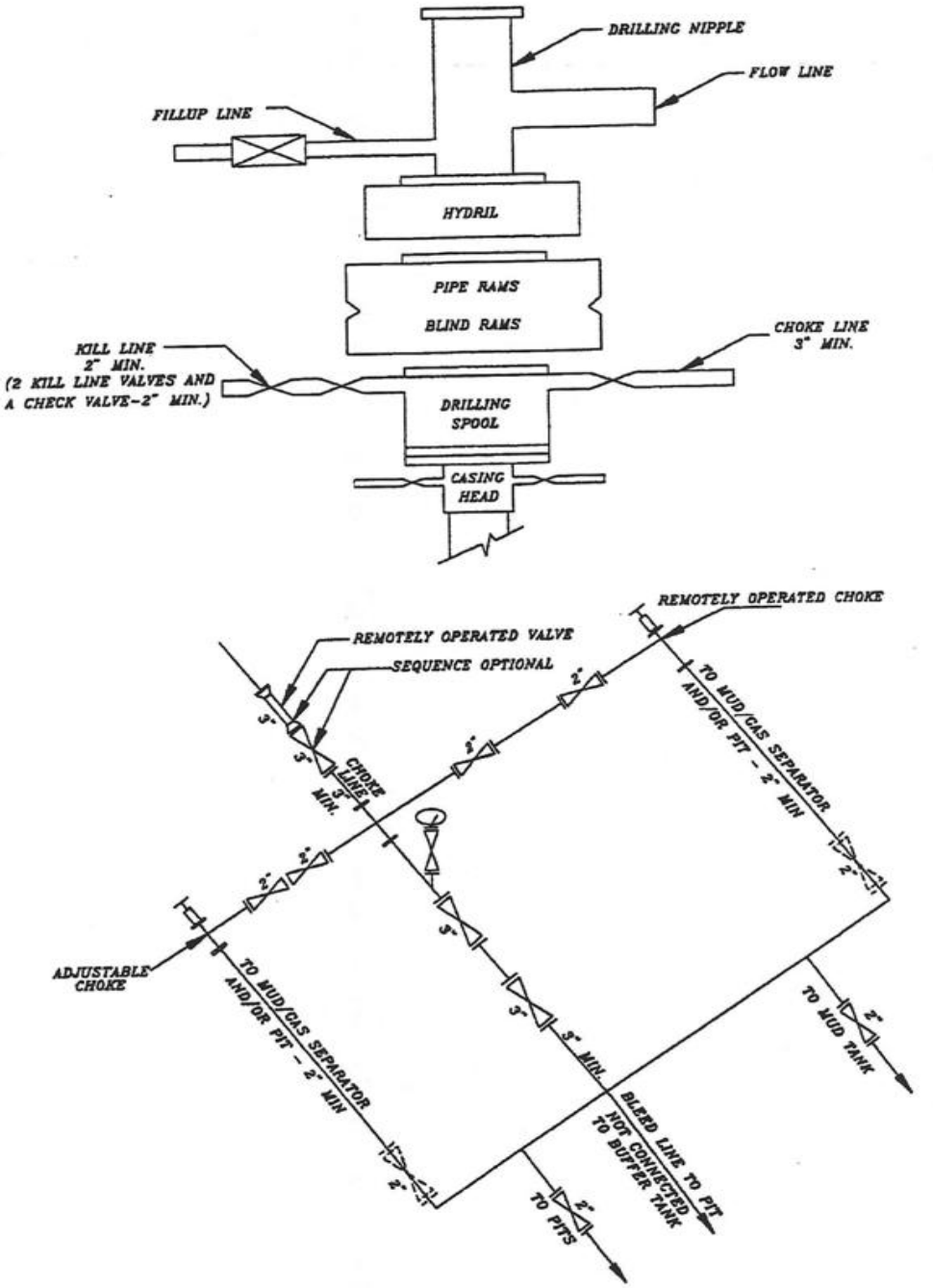
Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:** _____ **DATE:** _____
John Huycke / Grant Schluender

**DRILLING SUPERINTENDENT:** _____ **DATE:** _____
John Merkel / Lovel Young

**EXHIBIT A**
**Bonanza 1023-6N1CS**




**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

'APIWellNo:43047504540000'

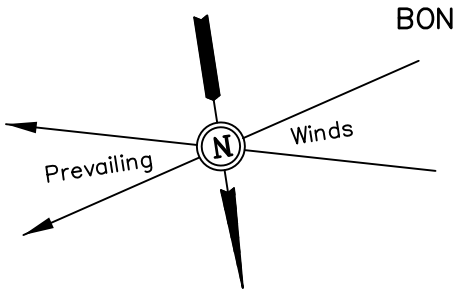
# Kerr–McGee Oil & Gas Onshore LP

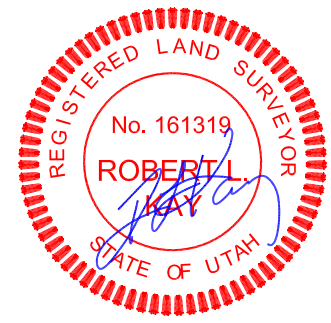
LOCATION LAYOUT FOR

BONANZA #1023–6M1BS, #1023–6N4BS, #1023–6N1CS & #1023–6N1AS
SECTION 6, T10S, R23E, S.L.B.&M.
LOT 6

*FIGURE #1*

SCALE: 1" = 50'
DATE: 10–29–08
Drawn By: C.C.
REVISED: 12–31–08 L.K.




| LINE TABLE | | |
|---|---|---|
| LINE | DIRECTION | LENGTH |
| L1 | 30.358056 Az. | 73.63' |

| WELL #1023–6L |
|---|
| NAD 83 (SURFACE LOCATION) |
| LATITUDE = 39°58'30.52" (39.975144)<br>LONGITUDE = 109°22'33.74" (109.376039) |
| NAD 27 (SURFACE LOCATION) |
| LATITUDE = 39°58'30.64" (39.975178)<br>LONGITUDE = 109°22'31.29" (109.375358) |

Well #6M1BS
BOTTOM HOLE

C–8.3'
El. 52.3'

C–5.1'
El. 49.1'

Existing Access Road

F–1.7'
El. 42.3'
Sta. 5+00

Approx. Top of Cut Slope

S04°27'08"W – 306.96' (To Bottom Hole)

250'

240'

S55°13'49"E – 1577.39' (To Bottom Hole)

S67°14'52"E – 1522.42' (To Bottom Hole)

S79°08'06"E – 1605.83' (To Bottom Hole)

Pit Topsoil

Existing Spoils Stockpile
El. 52.8'

C–18.8'
(btm. pit)

FLARE PIT

100'

RESERVE PITS
(10' Deep)

Total Pit Capacity
W/2' of Freeboard
= 34,680 Bbls. ±
Total Pit Volume
= 7,090 Cu. Yds.

Reserve Pit Backfill & Spoils Stockpile

15' WIDE BENCH

1 1/2:1 Slope

El. 51.1'
C–17.1'
(btm. pit)

C–4.7'
El. 48.7'

C–0.2'
El. 44.2'

C–0.1'
El. 44.1'

Existing Wrapped Pipeline

PIPE TUBS

PIPE RACKS

CATWALK

GRADE
El. 44.0'

GRADE
El. 44.0'

GRADE
El. 44.0'

#1023–6M1BS

#1023–6N4BS

#1023–6N1CS

#1023–6N1AS

C–0.1'
El. 44.1'

F–0.2'
El. 43.8'

F–0.3'
El. 43.7'

LIGHT PLANT

RIG

MUD TANKS

MUD TANKS

PUMP HOUSE

COMPRESSOR

BOOSTER

TOILET

TRAILER

WATER TANK

Existing Drainage

Existing Topsoil Stockpile

Topsoil Stockpile

TRASH

EXISTING WELL #6L

PROPANE STORAGE

EXISTING PAD

Existing 4" Pipeline

Sta. 0+75

Sta. 2+50

F–4.7'
El. 39.3'

Sta. 0+00

Approx. Toe of Fill Slope

SEP.

BERM

TANK

TANK

METH.

C–4.2'
El. 48.2'

NO DISTURBANCE BEYOND THIS POINT

Elev. Ungraded Ground At #6M1BS Loc. Stake = 5144.0'
Elev. Graded Ground at #6M1BS Location Stake = 5144.0'


UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789–1017

'APIWellNo:43047504540000'

# Kerr-McGee Oil & Gas Onshore LP

## TYPICAL CROSS SECTIONS FOR

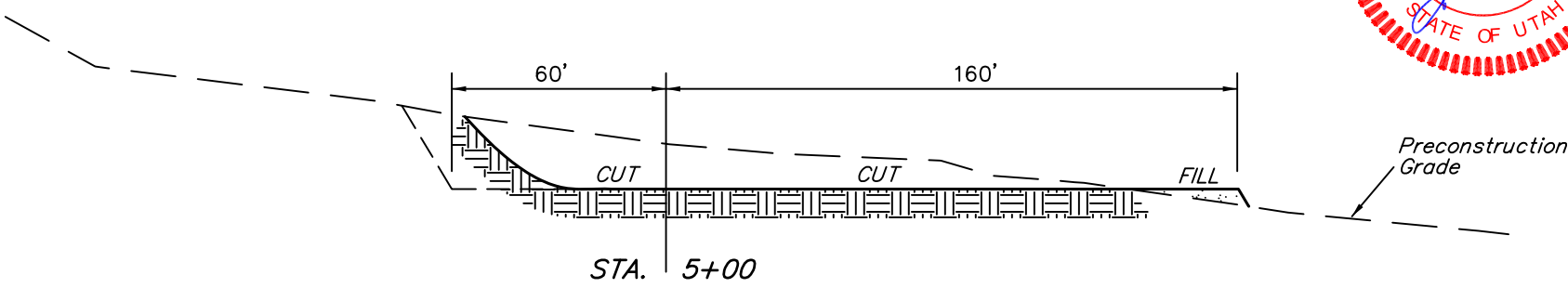
BONANZA #1023-6M1BS, #1023-6N4BS, #1023-6N1CS & #1023-6N1AS
SECTION 6, T10S, R23E, S.L.B.&M.
LOT 6

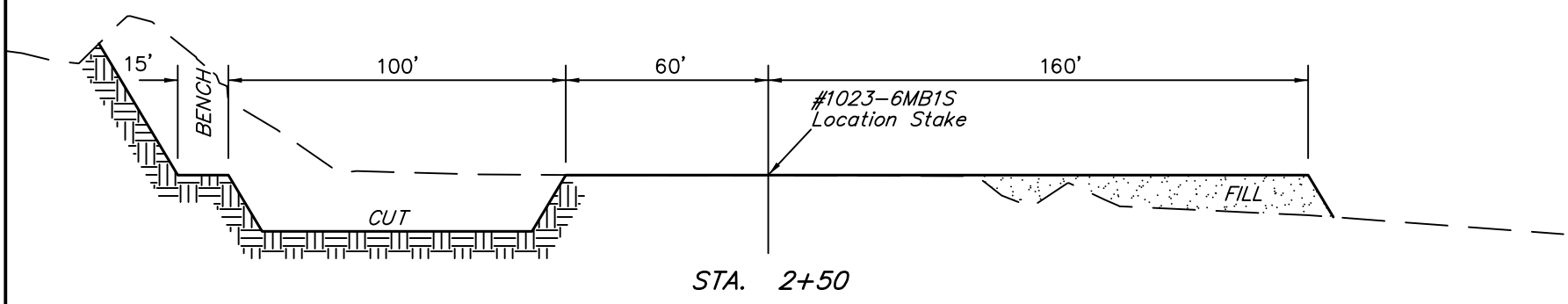
*FIGURE #2*

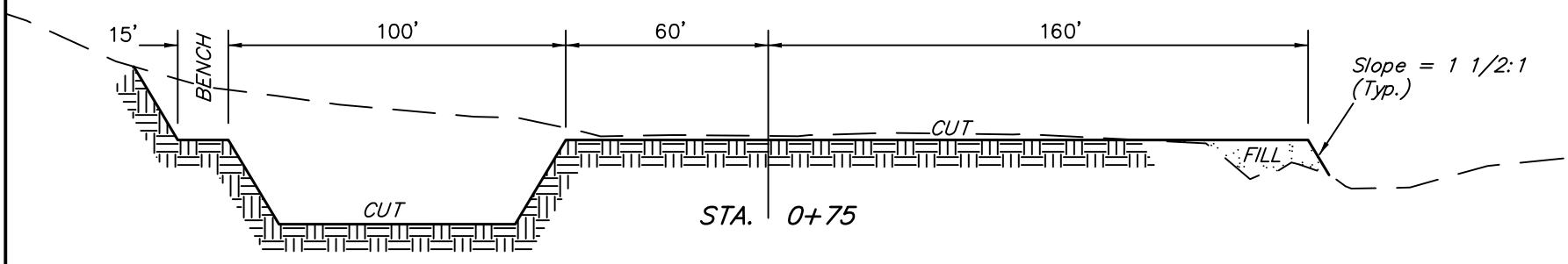
1" = 20' X-Section Scale
1" = 50'

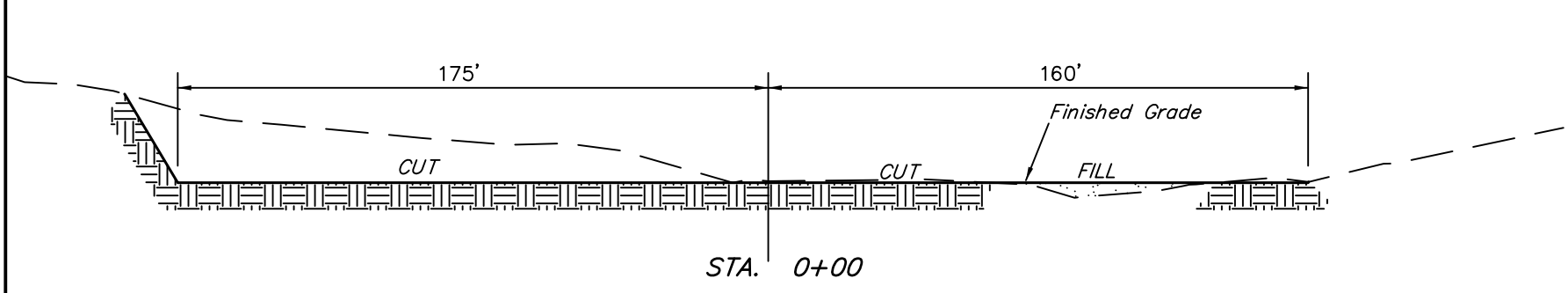
DATE: 10-29-08
Drawn By: C.C.
REVISED: 12-31-08 L.K.

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH




### APPROXIMATE ACREAGES

EXISTING WELL SITE DISTURBANCE = ±1.252 ACRES
PROPOSED WELL SITE DISTURBANCE = ±3.587 ACRES

PROPOSED WELL SITE DISTURBANCE = ±4.839 ACRES

### APPROXIMATE YARDAGES

CUT
(6") Topsoil Stripping = 1,880 Cu. Yds.
(New Construction Only)
Remaining Location = 16,950 Cu. Yds.

TOTAL CUT = 18,830 CU.YDS.
FILL = 3,890 CU.YDS.

* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

EXCESS MATERIAL = 14,940 Cu. Yds.
Topsoil & Pit Backfill = 5,430 Cu. Yds.
(1/2 Pit Vol.)
EXCESS UNBALANCE = 9,510 Cu. Yds.
(After Interim Rehabilitation)


UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

’APIWellNo:43047504540000’

# Kerr-McGee Oil & Gas Onshore LP

## BONANZA #1023-06M1BS, #1023-06N1AS, #1023-06N1CS & #1023-06N4BS

**LOCATED IN UINTAH COUNTY, UTAH**
**SECTION 6, T10S, R23E, S.L.B.&M.**


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES — CAMERA ANGLE: WESTERLY


PHOTO: VIEW OF EXISTING ACCESS — CAMERA ANGLE: NORTHEASTERLY

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

| LOCATION PHOTOS | 10 MONTH | 28 DAY | 08 YEAR | PHOTO |
|---|---|---|---|---|
| TAKEN BY: B.B. | DRAWN BY: C.H. | REVISED: 01-02-09 S.P. | | |

# Kerr-McGee Oil & Gas Onshore LP
# BONANZA #1023-06M1BS, #1023-06N1AS, #1023-06N1CS & #1023-06N4BS
# SECTION 6, T10S, R23E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 3.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY, THEN SOUTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 2.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE #1023-7D AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.4 MILES TO THE #1023-6M AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 56.3 MILES.

**Bonanza 1023-6M1BS**
Surface: 1,511’ FSL 733’ FWL (NW/4 SW/4) – Lot 6
BHL: 1,511’ FSL 710’ FWL (SW/4 SW/4) – Lot 7

**Bonanza 1023-6N1AS**
Surface: 1,570’ FSL 742’ FWL (NW/4 SW/4) – Lot 6
BHL: 1,260’ FSL 2,320’ FWL (SE/4 SW/4)

**Bonanza 1023-6N1CS**
Surface: 1,550’ FSL 739’ FWL (NW/4 SW/4) – Lot 6
BHL: 955’ FSL 2,145’ FWL (SE/4 SW/4)

**Bonanza 1023-6N4BS**
Surface: 1,531’ FSL 736’ FWL (NW/4 SW/4) – Lot 6
BHL: 625’ FSL 2,035’ FWL (SE/4 SW/4)

Pad: Bonanza 1023-6L
Sec. 6 T10S R23E

Uintah, Utah
Mineral Lease: UTU 38419

# ONSHORE ORDER NO. 1

## *MULTI-POINT SURFACE USE & OPERATIONS PLAN*

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. An NOS was submitted in January 2009 showing the surface locations in NW/4 NE/4 of Section 6 T10S R23E.

This Surface Use Plan of Operations (SUPO) or 13-point plan is submitted under the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) and provides details specific to this pad. General information is provided in the MDP, which is available upon request and at the BLM-Vernal Field Office.

An on-site meeting was held on February 3, 2009. Present were:

- Verlyn Pindell, Dave Gordon, Scott Ackerman, Karl Wright – BLM;
- David Kay – Uintah Engineering & Land Surveying;
- Kolby Kay – 609 Consulting, LLC
- Tony Kazeck, Clay Einerson, Raleen White, Ramey Hoopes, Grizz Oleen, Charles Chase and Spencer Biddle – Kerr-McGee.

**Directional Drilling:**

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

This pad will be expanding the existing Bonanza 1023-6L well pad.

**1. Existing Roads:**

A) Refer to Topo Map A for directions to the location.
B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.
C) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*
No new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. There will be no turn outs.

***Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.***

Surfacing material may be necessary, depending upon weather conditions.

**3. Location of Existing Wells within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee. All facilities will be painted within six months of installation. The required color is Shadow Gray, a non-reflective earthtone, or as specified by BLM. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

**Approximately ±400' of 4" pipeline will be upgraded to 8" pipeline. Refer to Topo D for the existing pipeline.** Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

**5. Location and Type of Water Supply:**
*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**
*See MDP for additional details on Source of Construction Materials.*

Surface and subsoil materials in the immediate area will be utilized.

If needed, gravel will be obtained from a commercial source.

**7. Methods of Handling Waste Materials:**
*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E.

**8. Ancillary Facilities:**
*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

**9.** **Well Site Layout:** (See Location Layout Diagram)
*See MDP for additional details on Well Site Layout.*

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, rig orientation, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s), and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

All pits will be fenced according to the following minimum standards:

Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Sundry Notice Form shall be submitted.

**10.** **Plans for Reclamation of the Surface:**
*See MDP for additional details on Plans for Reclamation of the Surface.*

**11.** **Surface/Mineral Ownership:**

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

**12. Other Information:**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved MDP and SUPO, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

A Class III archaeological survey report and paleontological survey report is attached.

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the AO. Within five (5) working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and,
- a timeframe for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the finds of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of the mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible fro mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed the operator will then be allowed to resume construction.

"The holder of this authorization shall immediately bring any paleontological resources or fossils discovered as a result of operations under this authorization to the attention of the authorized officer. The holder shall suspend all activities in the vicinity of such discovery until notified to proceed by the authorized officer. The authorized officer will evaluate, or will have evaluated, such discoveries not later than five (5) working days after being notified, and will determine what action shall be taken with respect to such discoveries. The decision as to the appropriate measures to mitigate adverse effects to significant paleontological resources will be made by the authorized officer after consulting with the holder. The holder may be responsible for the cost of any investigations necessary for the evaluation, and for any mitigative measures."

**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6007

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720-929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Kathy Schneebeck Dulnoan

June 1, 2009
Date

# CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 43 PROPOSED WELL LOCATIONS (T10S, R23E, SECTIONS 5, 6, 7, 8, AND 10) UINTAH COUNTY, UTAH

’APIWellNo:43047504540000’

# CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP’S 43 PROPOSED WELL LOCATIONS (T10S, R23E, SECTIONS 5, 6, 7, 8, AND 10) UINTAH COUNTY, UTAH


By:

Nicole Shelnut


Prepared For:

Bureau of Land Management
Vernal Field Office

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078


Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532



MOAC Report No. 08-331

February 26, 2009

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

# INTRODUCTION

A Class I literature review was completed by Montgomery Archaeological Consultants, Inc. (MOAC) in February 2009 of Kerr-McGee Onshore's 43 proposed well locations in Township 10S, Range 23E. The project area is situated north of the White River and south of the town of Bonanza, Uintah County, Utah. The wells are designated (Bonanza 1023-05F) Directional Pad, Bonanza 1023-05G2AS, Bonanza 1023-05G3BS, Bonanza 1023-05G2CS, Bonanza 1023-05G3CS, (Bonanza 1023-05I) Directional Pad, Bonanza 1023-05IS, (Bonanza 1023-06L) Directional Pad, Bonanza 1023-06M1BS, Bonanza 1023-06N1AS, Bonanza 1023-06N1CS, Bonanza 1023-06N4BS, Bonanza 1023-07JT, FMF #1-7 Directional Pad, Bonanza 1023-07J2AS, Bonanza 1023-07J2DS, (Bonanza 1023-07L) Directional Pad, Bonanza 1023-07L3DS, Bonanza 1023-07M2AS, Bonanza 1023-07N2AS, Bonanza 1023-07N2DS, Bonanza 1023-07P Directional Pad, Bonanza 1023-07O4S, Bonanza 1023-07P2S, Bonanza 1023-08A Directional Pad, Bonanza 1023-08A1DS, Bonanza 1023-08A4BS, Bonanza 1023-08B1AS, Bonanza 1023-08B2AS, (Bonanza 1023-08D) Directional Pad, Bonanza 1023-08C4CS, Bonanza 1023-08D2DS, Bonanza 1023-08D3DS, Bonanza 1023-08F3DS, (Bonanza 1023-08J) Directional Pad, Bonanza 1023-08J1S, Bonanza 1023-08J3, Bonanza 1023-08O2S, Bonanza 1023-08O3S, Bonanza 1023-10A Directional Pad 1023-10A2DS, 1023-10A4BS, 1023-10H1BS, 1023-10H2DS. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado.

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The project area in which Kerr-McGee Onshore's 43 proposed Bonanza well locations occur was previously inventoried by MOAC for two Class III inventories. In 2003, MOAC completed a block inventory of Sections 4, 5, 6, 7, and 8 in Township 10 South, Range 23 East for Westport Oil and Gas Company (Elkins and Montgomery 2003). In 2005, MOAC completed a cultural resource inventory for Westport Oil & Gas Company's eight proposed well locations including Bonanza #1023-10A (Seacat 2005).

A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventories indicated that five previously recorded sites (42Un3487, 42Un3490, 42Un3491, 42Un3528, and 42Un3541) occur in the current project area.

## DESCRIPTION OF THE PROJECT AREA

The project area is situated north of the White River and south of the town of Bonanza, Uintah County, Utah. The legal description is Township 10S, Range 23E, Sections 5, 6, 7, 8, 10 and 11 (Figure 1, Table 1). Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office.

Table 1. Kerr-McGee Onshore's 43 Bonanza Well Locations.

| Well Designation | Legal Description | Access/Pipeline Corridor | Cultural Resources |
|---|---|---|---|
| (Bonanza 1023-05F) Directional Pad<br>1023-05G2AS<br>1023-05G3BS<br>1023-05G2CS<br>1023-05G3CS | SW/NE Sec. 5,<br>T10S, R23 | None | 42Un3487,<br>42Un3490,<br>42Un3491 |
| (Bonanza 1023-05I) Directional Pad<br>1023-05IS | NE/SE Sec. 5,<br>T10S, R23 | None | None |
| (Bonanza 1023-06L) Directional Pad<br>1023-06M1BS<br>1023-06N1AS<br>1023-06N1CS<br>1023-06N4BS | NW/SW Sec. 6<br>T10S, R23 | Pipeline: 505 ft | 42Un3541 |
| Bonanza 1023-07JT, FMF #1-7 Directional Pad<br>1023-07J2AS<br>1023-07J2DS | NW/SE Sec. 7<br>T10S, R23 | Pipeline: 95 ft | None |
| (Bonanza 1023-07L) Directional Pad<br>1023-07L3DS<br>1023-07M2AS<br>1023-07N2AS<br>1023-07N2DS | NW/SW Sec. 7<br>T10S, R23 | Pipeline: 1652 ft | None |
| Bonanza 1023-07P Directional Pad<br>1023-07O4S<br>1023-07P2S | SE/SE Sec. 7<br>T10S, R23 | None | 42Un3528 |
| Bonanza 1023-08A Directional Pad<br>1023-08A1DS<br>1023-08A4BS<br>1023-08B1AS<br>1023-08B2AS | NE/NE Sec. 8<br>T10S, R23 | Access: 237 ft<br>Pipeline: 841 ft | None |
| (Bonanza 1023-08D) Directional Pad<br>1023-08C4CS<br>1023-08D2DS<br>1023-08D3DS<br>1023-08F3DS | NW/NW Sec. 8<br>T10S, R23 | Access: 379 ft<br>Pipeline: 139 ft | None |
| (Bonanza 1023-08J) Directional Pad<br>1023-08J1S<br>1023-08J3<br>1023-08O2S<br>1023-08O3S | NW/SE Sec. 8<br>T10S, R23 | Access: 99 ft<br>Pipeline: 553 ft | None |
| Bonanza 1023-10A Directional Pad<br>1023-10A2DS<br>1023-10A4BS<br>1023-10H1BS<br>1023-10H2DS | NE/NE Sec. 10<br>T10S, R23 | Pipeline: 1468 ft | None |

’APIWellNo:43047504540000’

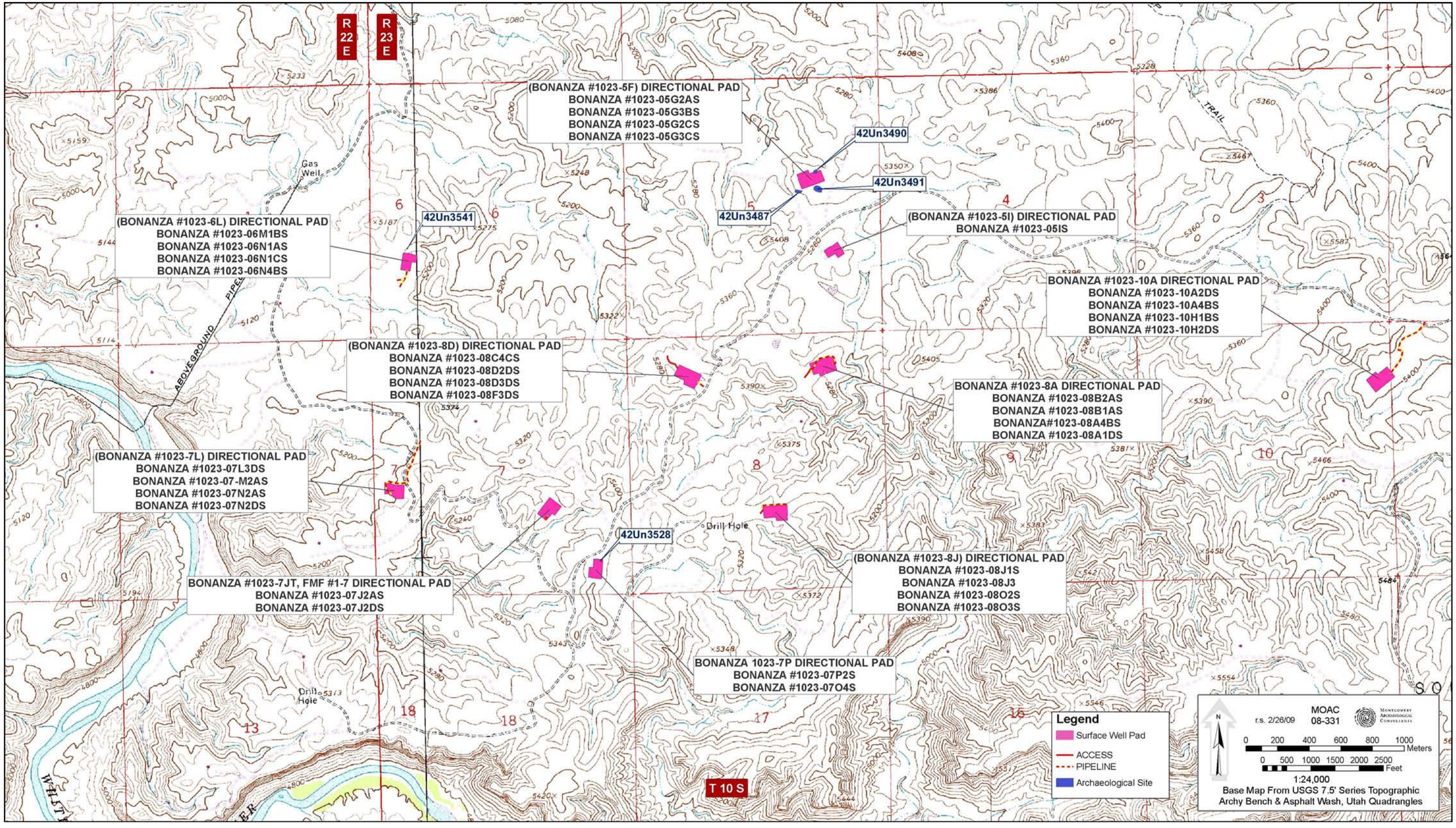



Figure 1. Kerr-McGee Oil and Gas Onshore LP’s Proposed Bonanza Well Locations in Uintah County, Utah.

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated east of the White River and southeast of the town of Ouray, Uintah County, Utah. Elevation ranges from 5160 to 5400 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

## CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review of Kerr-McGee Onshore's 43 proposed well locations and associated pipeline corridors in Township 10S, Range 23E resulted in the location of five previously documented sites (42Un3487, 42Un3490, 42Un3491, 42Un3528, and 42Un3541). One site (42Un3487) consists of two historic inscriptions, three sites (42Un3490, 42Un3491, and 42Un3528) are historic trash scatters, and one site 42Un3541 is a historic rock cairn; all of these sites are evaluated not eligible to the NRHP. Based on the findings, a determination of "no adverse impact" is recommended for the undertaking pursuant to Section 106, CFR 800.

## REFERENCES CITED

Elkins, M and K. Montgomery
2003 Cultural Resource Block Inventory of Sections 4, 5, 6, 7, and 8, Township 10 South, Range 23 East for Westport Oil & Gas Company, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-03-MQ-0882.

Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas
2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah.

Seacat, T. B.
2005 Cultural Resource Inventory of Westport Oil & Gas Company's Proposed Bonanza #1023-10A, C, E, F, G, J, O, P Well Locations in Section 10, T10S R23E, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-05-MQ-0351.

Stokes, W. L.
1986 *Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.

**IPC #09-32**

# Paleontological Reconnaissance Survey Report

## Survey of Kerr McGee's Proposed Multi-Well Pads, Access Roads, and Pipeline Upgrades for "NBU #1022-12P, #1022-24N2, Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS, #1023-07P2S & O4S, & #1023-07J2AS & J2DS" (Sec. 12, T 10 S, R 22 E) & (Sec. 6 & 7, T 10 S, R 23 E)

Archy Bench & Asphalt Wash
Topographic Quadrangles
Uintah County, Utah

March 25, 2009

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

## INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads, access roads, and pipeline upgrades for "NBU #1022-12P, #1022-24N2, Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS, #1023-07P2S & O4S, #1023-07J2AS & J2DS" (Sec. 12, T 10 S, R 22 E) & (Sec. 6 & 7, T 10 S, R 23 E) was conducted by Simon Masters, Jason Klimek, and Amanda Dopheide on February 24 and 27, 2009. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

BLM, 2008: BLM IM 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources. USDI – BLM Washington Office directive, October 29, 2008 replaces the Condition Classification System from Handbook H-8270-1. The following section outlines the new Potential Fossil Yield Classification (PFYC) System. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- ***Class 1* – Very Low**. Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- ***Class 2* – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc…)
- ***Class 3* – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.

  - ***Class 3a* – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
  - ***Class 3b* – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- ***Class 4* – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - ***Class 4a* –** Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 4b* –** Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- ***Class 5* – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - ***Class 5a* -** Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 5b* -** Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

## LOCATION

Kerr McGee's proposed multi-well pads, access roads, and pipeline upgrades for "NBU #1022-12P, #1022-24N2, Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS, #1023-07P2S & O4S, #1023-07J2AS & J2DS" (Sec. 12, T 10 S, R 22 E) & (Sec. 6 & 7, T 10 S, R 23 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), about 1-1.5 miles east and 1-2 miles north of the White River in the Saddletree Draw and Asphalt Wash area and about 12-15 miles northeast of Bonanza, Utah. The project area can be found on the Archy Bench and Asphalt Wash 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

## PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

## GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

## FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

## PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

**Multi-well pad NBU #1022-12P**
The proposed well is located in the SE/SE quarter-quarter section of Sec. 12, T 10 S, R 22 E, and is approached from the east by an existing access road and pipeline (Figure 1). The wells are staked on an existing pad. The geology of the proposed area consists of thin colluvium and small sharp fragments of hard resistant siltstone underlain by a thick paleochannel of tan, fluvial sandstone that is exposed to the west end of the pad. No fossils were discovered.

**Multi-well pad NBU #1022-24N2**
The proposed well is located in the SW/SE quarter-quarter section of Sec. 12, T 10 S, R 22 E, and is approached from the east by an existing access road and pipeline (Figure 1). The wells are staked on gently sloping ground on the top of a prominent ridge. The northeast corner of the pad

is staked on a reclaimed well pad. The pit of the proposed pad is staked in the southeast corner of the pad. The geology of the proposed area consists of thin colluvium and small, angular fragments of resistant siltstone underlain by a thick paleochannel of tan, fluvial sandstone with fragments of green mudstone evident within the disturbed material of the reclaimed pad. No fossils were discovered.

**Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS**
The proposed well is situated in the NW/SW quarter-quarter section of Sec. 6, T 10 S, R 23 E, and is approached from the south by an existing access road and pipeline. The wells are staked on the existing pad "Bonanza #1023-6L" (Figure 1). The geology of the proposed project area consists of alternating beds of gray mudstone, maroon siltstone, and gray siltstone exhibiting desert varnish. Scattered fragments of turtle (*Echmatemys* sp.) were discovered along the side and base of the hill at the north end of the pad. Ichnofossils consisting of prominent burrows within weathered fragments of gray siltstone were also seen in the project area.

**Bonanza #1023-07P2S & O4S**
The proposed well is situated in the SE/SE quarter-quarter section of Sec. 7, T 10 S, R 23 E, and is approached from the north by an existing access road and pipeline (Figure 1). The wells are staked on an existing pad. The geology of the proposed project area consists of thin colluvium and small angular fragments of hard resistant siltstone underlain by a thick paleochannel of tan fluvial sandstone. No fossils were discovered.

**Bonanza #1023-07J2AS & J2DS**
The proposed pipeline begins in the NE/SE quarter-quarter section and travels approximately 1,000 feet east where it ties-in to the proposed multi-well pad in the NW/ SE quarter-quarter section of Sec. 7 (Figure 1). The project area is staked on relatively flat ground covered by tan colluvium, gravel to cobble sized pieces of purple and orange, medium-grained sandstone, gravel sized pieces of purple siltstone, and previously disturbed soil. An about 1 foot thick outcrop of laminated, tan, medium-grained sandstone was observed approximately 8 feet west of the pad. Another approximately 3 foot thick outcrop of laminated sandstone is situated roughly 6 feet. No fossils were found.

**SURVEY RESULTS**

| PROJECT | GEOLOGY | PALEONTOLOGY |
|---|---|---|
| **"Multi-well pad NBU #1022-12P"** (Sec. 12, T 10 S, R 22 E) | The wells are staked on an existing pad. The geology of the proposed area consists of thin colluvium and small sharp fragments of hard resistant siltstone underlain by a thick paleochannel of tan, fluvial sandstone that is exposed to the west end of the pad. | No fossils were discovered. **Class 3a** |

| | | |
|---|---|---|
| **"Multi-well pad NBU #1022-24N2"** (Sec. 12, T 10 S, R 22 E) | The wells are staked on gently sloping ground on the top of a prominent ridge. The northeast corner of the pad is staked on a reclaimed well pad. The pit of the proposed pad is staked in the southeast corner of the pad. The geology of the proposed area consists of thin colluvium and small, angular fragments of resistant siltstone underlain by a thick paleochannel of tan, fluvial sandstone with fragments of green mudstone evident within the disturbed material of the reclaimed pad. | No fossils were discovered.<br>**Class 3a** |
| **"Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS"** (Sec. 6, T 10 S, R 23 E) | The geology of the proposed project area consists of alternating beds of gray mudstone, maroon siltstone, and gray siltstone exhibiting desert varnish. | Scattered fragments of turtle (*Echmatemys* sp.) were discovered along the side and base of the hill at the north end of the pad. Ichnofossils consisting of prominent burrows within weathered fragments of gray siltstone were also seen in the project area.<br>**Class 3a** |
| **"Bonanza #1023-07P2S & O4S"** (Sec. 7, T 10 S, R 23 E) | The geology of the proposed project area consists of thin colluvium and small angular fragments of hard resistant siltstone underlain by a thick paleochannel of tan fluvial sandstone. | No fossils were discovered.<br>**Class 3a** |
| **"Bonanza #1023-07J2AS & J2DS"** (Sec. 7, T 10 S, R 23 E) | The project area is staked on relatively flat ground covered by tan colluvium, gravel to cobble sized pieces of purple and orange, medium-grained sandstone, gravel sized pieces of purple siltstone, and previously disturbed soil. An about 1 foot thick outcrop of laminated, tan, medium-grained sandstone was observed approximately 8 feet west of the pad. Another approximately 3 foot thick outcrop of laminated sandstone is situated roughly 6 feet. | No fossils were discovered.<br>**Class 3a** |

**RECOMMENDATIONS**

A reconnaissance survey was conducted for Kerr McGee's proposed multi-well pads, access roads, and pipeline upgrades for "NBU #1022-12P, #1022-24N2, Bonanza #1023-06M1BS, N1AS, N1CS, & N4BS, #1023-07P2S & O4S, #1023-07J2AS & J2DS" (Sec. 12, T 10 S, R 22 E) & (Sec. 6 & 7, T 10 S, R 23 E). The well pads, well pad expansions, and the associated access roads and pipelines covered in this report showed little to no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

**Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.**

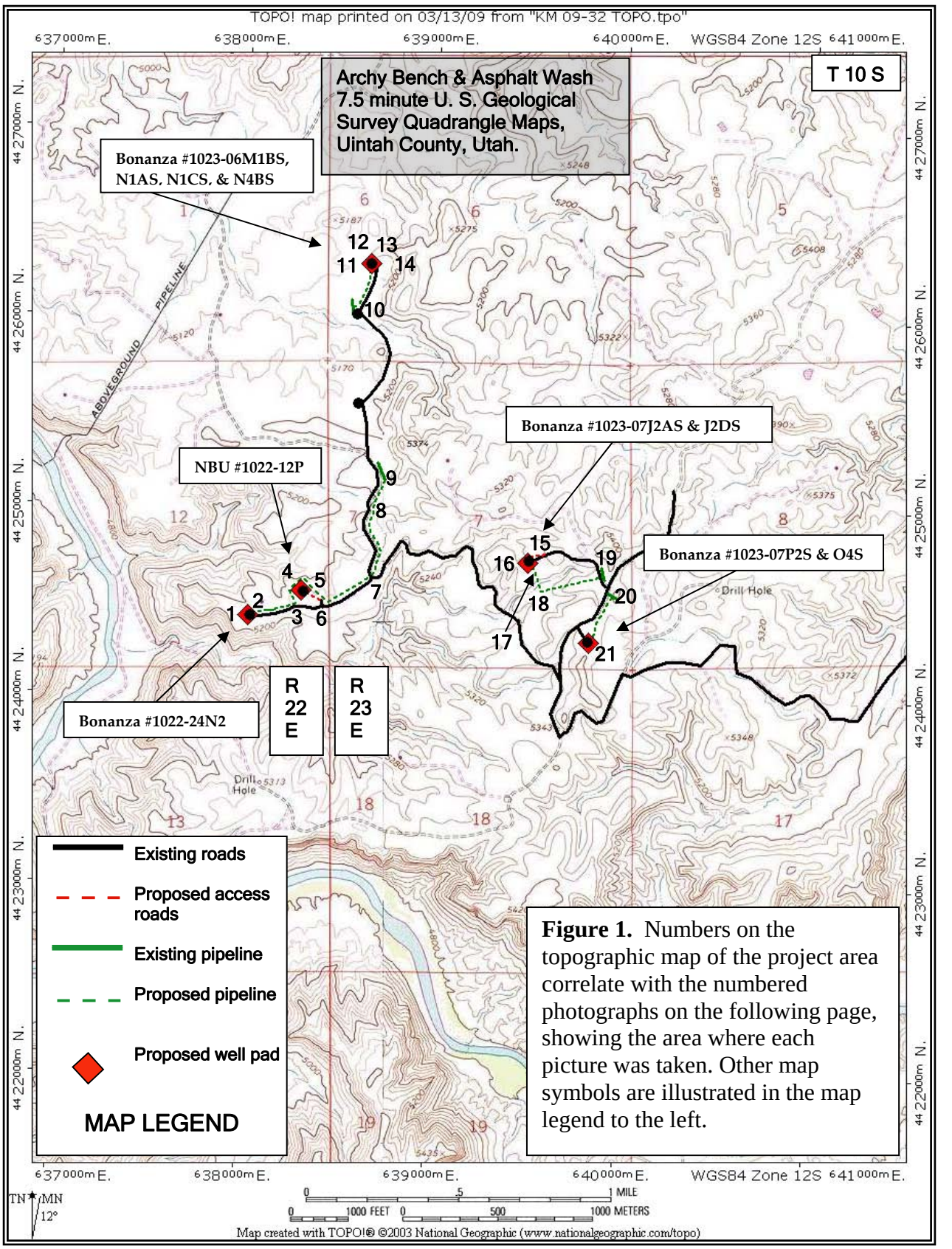



**Figure 1.** Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend to the left.

**Figure 1.** *continued…*

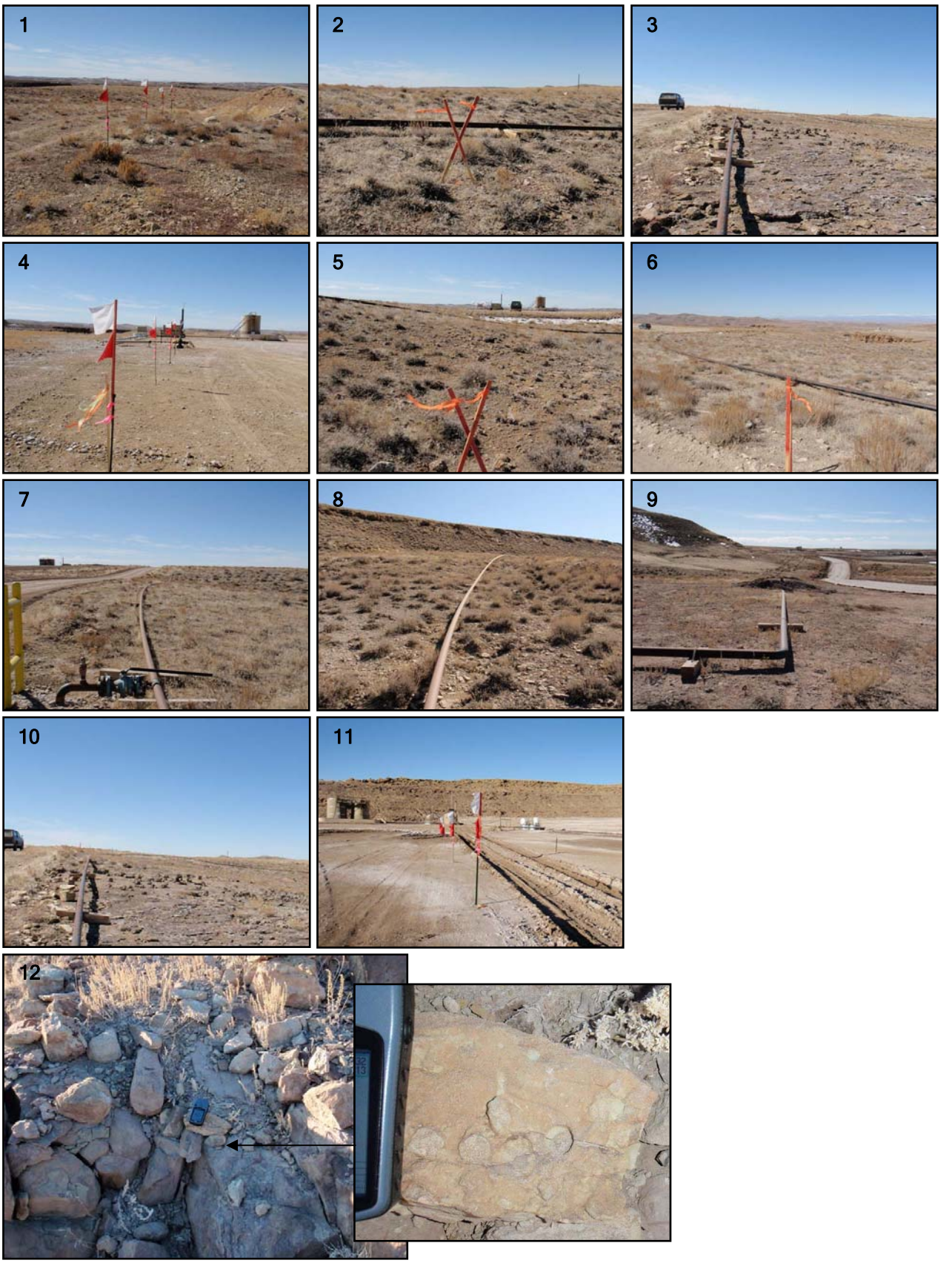
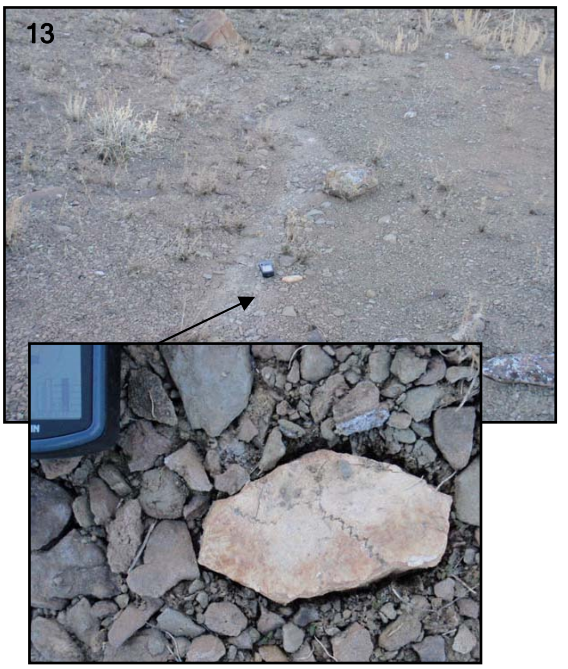
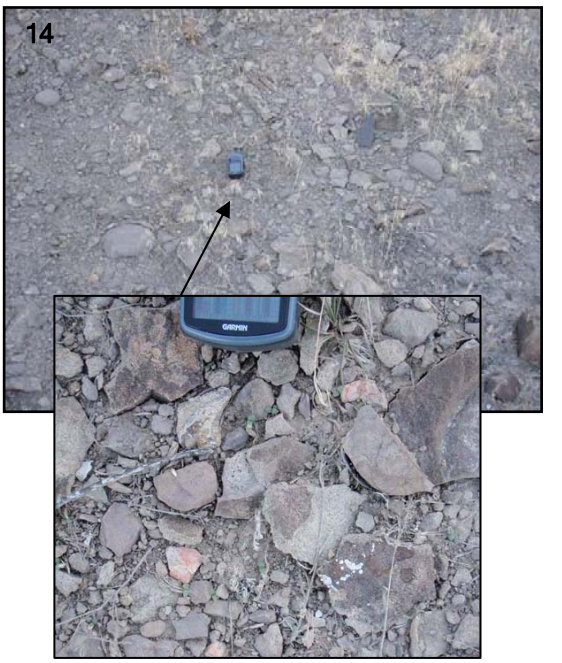


**Figure 1.** *continued…*










**REFERENCES CITED**

Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.

Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), northern Uinta Basin, northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.

Betts, C. W., 1871, The Yale College expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.

Black, C. C. and Dawson, M. R., 1966, A Review of Late Eocene Mammalian Faunas from North America: American Journal of Science, v. 264, p. 321-349.

Bryant, B., Naeser C. W., Marvin R. F., Mahnert H. H., 1989, Cretaceous and Paleogene Sedimentary Rocks and Isotopic Ages of Paleogene Tuffs,Uinta basin, Utah. And Ages of Late Paleogene and Neogene Tuffs and the Beginning of Rapid Regional Extension, Eastern Boundary of the Basin and Range Province near Salt lake City, Utah: In: Evolution of Sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.

Flynn, J. J., 1986, Correlation and geochronology of middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology, v. 55, p. 335-406.

Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and Paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, v. 34, p 33-60.

Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.

Marsell, R. E., 1964, Geomorphology of the Uinta Basin-A Brief Sketch: Thirteenth annual Field Conference. Association of Petroleum Geologists, p. 34-46.

Marsh, O. C., 1871, on the geology of the Eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.

_____ 1875a, Ancient lake basins of the Rocky Mountain region: American Journal of Science and Arts, v. 9, p. 49-52.

_____ 1875b, Notice of new Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

Osborn, H. F., 1895, Fossil mammals of the Uinta beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.

_____ 1929, The Titanotheres of Ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.

Peterson, O. A., 1931c, new species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.

Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.

Prothero, D. R., 1996, Magnetic Stratigraphy and biostratigraphy of the middle Eocene Uinta Formation, Uinta Basin, Utah, *in* Prothero, D. R., and Emry, R. J. editors, The Terrestrial Eocene-Oligocene Transition in North America, p. 3-24.

Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.

Riggs, E. S., 1912. New or Little Known Titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v. 159, p. 17-41.

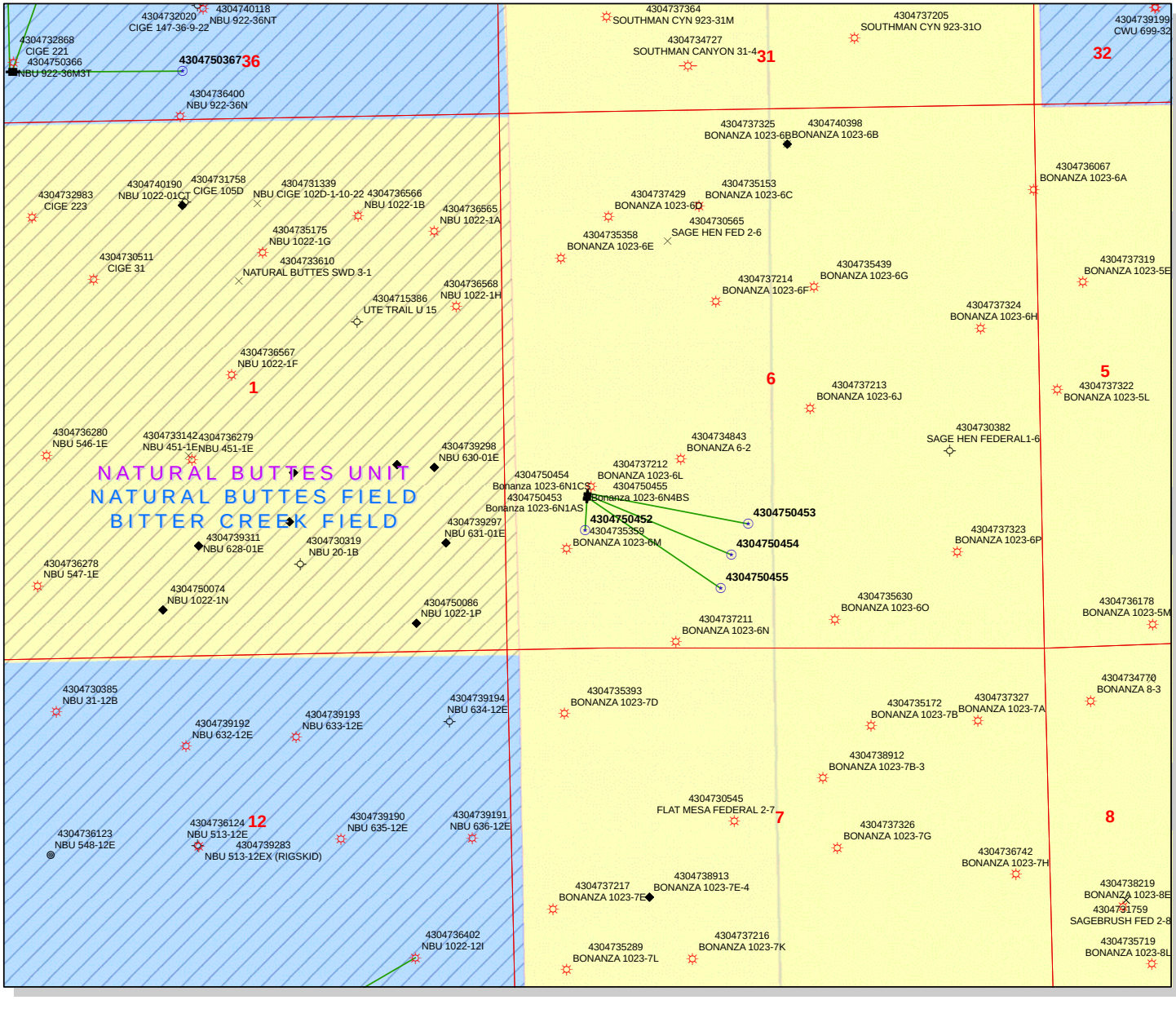
Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.

Scott, W. B., 1945, The Mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.

Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to early Arikareean "age" (Eocene and Oligocene), in Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene climatic and biotic evolution: Princeton University Press, p. 464-493.

Wood, H. E., 1934, Revision of the Hyrachyidaes: American Museum of Natural History Bulletin, v. 67, p. 181-295.

_____ and others, 1941, Nomenclature and Correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48. 52, no. 1, Jan. 1, p. 1-48.




**API Number: 4304750454**

**Well Name: Bonanza 1023-6N1CS**

**Township 10.0 S Range 23.0 E Section 6**

**Meridian: SLBM**

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

**Units**

**STATUS**
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

**Fields**

**STATUS**
- ACTIVE
- COMBINED
- Sections

**Wells Query Events**

<all other values>

**GIS_STAT_TYPE**
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS


1,200 600 0 1,200 Feet

1:12,000

'APIWellNo:43047504540000'

# WORKSHEET
# APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 6/1/2009 **API NO. ASSIGNED:** 43047504540000

**WELL NAME:** Bonanza 1023-6N1CS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWSW 6 100S 230E **Permit Tech Review:** ☑

**SURFACE:** 1550 FSL 0739 FWL **Engineering Review:** ☑

**BOTTOM:** 0955 FSL 2145 FWL **Geology Review:** ☑

**COUNTY:** UINTAH

**LATITUDE:** 39.97498 **LONGITUDE:** -109.37564

**UTM SURF EASTINGS:** 638713.00 **NORTHINGS:** 4426033.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 38419 **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 1 - Federal **COALBED METHANE:** NO

**RECEIVED AND/OR REVIEWED:**

- ☑ **PLAT**
- ☑ **Bond:** FEDERAL - WYB000291
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

**Commingling Approved**

**LOCATION AND SITING:**

- ☐ **R649-2-3.**

**Unit:**

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

**Board Cause No:** Cause 179-14

**Effective Date:** 6/12/2008

**Siting:** 460' fr ext. drilling unit boundary

- ☑ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:** 3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason

JON M. HUNTSMAN, JR.
Governor
GARY R. HERBERT
Lieutenant Governor

**State of Utah**
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

# Permit To Drill

**********

**Well Name:** Bonanza 1023-6N1CS
**API Well Number:** 43047504540000
**Lease Number:** UTU 38419
**Surface Owner:** FEDERAL
**Approval Date:** 6/18/2009

**Issued to:**
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingle:**
In accordance with Board Cause No. 179-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

**General:**
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

**Notification Requirements:**
Notify the Division within 24 hours of spudding the well.

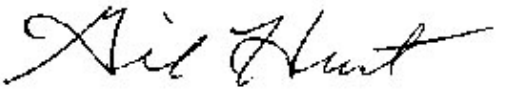
API Well No: 43047504540000

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.
- Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

**Reporting Requirements:**
All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**Approved By:**



Gil Hunt
Associate Director, Oil & Gas

# DIVISION OF OIL, GAS AND MINING

## *SPUDDING INFORMATION*

Name of Company: **KERR-McGEE OIL & GAS ONSHORE, L.P.**

Well Name: **BONANZA 1023-6N1CS**

Api No: **43-047-50454** Lease Type: **FEDERAL**

Section **06** Township **10S** Range **23E** County **UINTAH**

Drilling Contractor **PETE MARTIN DRLG** RIG # **BUCKET**

## SPUDDED:

Date **04/07/2010**

Time **8:00 AM**

How **DRY**

***Drilling will Commence:***

Reported by **JAMES GOBER**

Telephone # **(435) 828-7024**

**Date** **04/07/2010** **Signed** **CHD**

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

# ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6100

**Well 1**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| 4304750454 | BONANZA 1023-6N1CS | | NWSW | 6 | 10S | 23E | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| A | 99999 | 17580 | 4/7/2010 | | | 4/28/10 | |

**Comments:** MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 4/7/2010 AT 8:00 HRS. BHL=SESW

**Well 2**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| 4304750453 | BONANZA 1023-6N1AS | | NWSW | 6 | 10S | 23E | UINTAH |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| A | 99999 | 17581 | 4/7/2010 | | | 4/28/10 | |

**Comments:** MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 4/7/2010 AT 11:00 HRS. BHL=SESW

**Well 3**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| | | | | | | | |

**Comments:**

**ACTION CODES:**
- **A** - Establish new entity for new well (single well only)
- **B** - Add new well to existing entity (group or unit well)
- **C** - Re-assign well from one existing entity to another existing entity
- **D** - Re-assign well from one existing entity to a new entity
- **E** - Other (Explain in 'comments' section)

ANDY LYTLE
**Name (Please Print)**
**Signature**
REGULATORY ANALYST
**Title**
4/8/2010
**Date**

RECEIVED
APR 08 2010
DIV. OF OIL, GAS & MINING

(5/2000)

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 6 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| ✓ SPUD REPORT Date of Spud: 4/7/2010 | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 4/7/2010 AT 8:00 HRS.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
April 08, 2010

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Andy Lytle | 720 929-6100 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 4/8/2010 |

RECEIVED April 08, 2010

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 6 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT Report Date: 4/14/2010 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

MIRU CAPSTAR 310 RIG ON 4/11/2010. DRILLED 11" SURFACE HOLE TO 1941'. RAN 8-5/8" 28# IJ55 SURFACE CSG. PUMP 110 BBLS OF WATER AHEAD, PUMP 20 BBLS OF GEL WATER. LEAD CMT W/100 SX OF CLASS G HI FILL CMT @ 11.0 PPG, 3.52 YD. TAILED CMT W/225 SX OF CLASS G PREM LITE CMT @ 15.8 PPG, 1.15 YD. DROP PLUG ON FLY, DISPLACE W/146.5 BBLS OF WATER, 250 PSI OF LIFT @ 2 BBLS/MIN RATE. 1 BBLS OF LEAD TO SURFACE. BUMP PLUG W/800 PSI. FLOAT HELD. CEMENT FELL. PUMP 100 SX OF CLASS G PREM LITE TOP OUT CMT @ 15.8 PPG, 1.15 YD DOWN BACK SIDE. NO CEMENT TO SURFACE. WAIT TILL NEXT JOB TO TOP OUT. WORT.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
April 15, 2010

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Andy Lytle | 720 929-6100 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 4/14/2010 |

RECEIVED April 14, 2010

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 6 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 4/15/2010 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ✓ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the surface casing size for this well from FROM: 9-5/8" TO: 8-5/8". Additionally, Kerr-McGee requests to change the cement program for this well due to a revised drilling procedure. The production casing will still be cemented it's entire length to the surface. Please see the attached drilling program for additional details. All other information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.

**Accepted by the Utah Division of Oil, Gas and Mining**

**Date:** May 03, 2010

**By:**

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Danielle Piernot | 720 929-6156 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 4/6/2010 |

**RECEIVED** April 06, 2010

# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPANY NAME | KERR-McGEE OIL & GAS ONSHORE LP | | | DATE | April 6, 2010 | | |
| WELL NAME | **Bonanza 1023-6N1CS** | | | TD | 8,400' | TVD | 8,840' MD |
| FIELD | Natural Buttes | COUNTY | Uintah | STATE | Utah | ELEVATION | 5,144' GL KB 5,159' |
| SURFACE LOCATION | NW/4 SW/4 | 1,550' FSL | 739' FWL | Sec 6 | T 10S | R 23E | Lot 6 |
| | Latitude: | 39.974914 | Longitude: | -109.376183 | | | NAD 83 |
| BTM HOLE LOCATION | SE/4 SW/4 | 955' FSL | 2,145' FWL | Sec 6 | T 10S | R 23E | |
| | Latitude: | 39.973300 | Longitude: | -109.371175 | | | NAD 83 |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde | | | | | | |
| ADDITIONAL INFO | Regulatory Agencies: BLM (Minerals), BLM (Surface), Tri-County Health Dept. | | | | | | |

| GEOLOGICAL | | | MECHANICAL | | |
|---|---|---|---|---|---|
| LOGS | FORMATION TOPS | DEPTH | HOLE SIZE | CASING SIZE | MUD WEIGHT |
| | | 40' | 14" | | |
| | | | 11" | 8-5/8", 28#, IJ-55, LTC | Air mist |

**All water flows encountered while drilling will be reported to the appropriate agencies.**

**Green River @ 1138'**

**Top of Birds Nest @ 1,375'**

**Mahogany @ 1,877'**

**Preset f/ GL @ 2,030' MD**

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

**Wasatch @ 4,122'**

Mud logging program TBD

Cased hole logging program from TD - surf csg

| | | |
|---|---|---|
| 7-7/8" | 4-1/2" 11.6# I-80 or equivalent BTC csg | Water / Fresh Water Mud 8.3-11.6 ppg |

**Mverde @ 6,276' TVD**

**MVU2 @ 7,219' TVD**

**MVU1 @ 7,778' TVD**

Max anticipated Mud required 11.6 ppg

**TD @ 8,400' TVD 8,840' MD**

# KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

## CASING PROGRAM

| | SIZE | INTERVAL | | | WT. | GR. | CPLG. | DESIGN FACTORS BURST | COLLAPSE | TENSION |
|---|---|---|---|---|---|---|---|---|---|---|
| CONDUCTOR | 14" | 0-40' | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 |
| SURFACE | 8-5/8" | 0 | to | 2,030 | 28.00 | IJ-55 | LTC | 1.00 | 1.98 | 6.06 |
| | | | | | | | | 7,780 | 6,350 | 278,000 |
| PRODUCTION | 4-1/2" | 0 | to | 8,840 | 11.60 | I-80 | BTC | 2.42 | 1.25 | 3.11 |
| | | | | | | | | | | |

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.65

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
**MASP 3,124 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
**MABHP 5,232 psi**

## CEMENT PROGRAM

| | | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | YIELD |
|---|---|---|---|---|---|---|---|
| SURFACE | LEAD | 500' | Premium cmt + 2% CaCl | 215 | 60% | 15.60 | 1.18 |
| **Option 1** | | | + 0.25 pps flocele | | | | |
| | TOP OUT CMT (6 jobs) | 1,200' | 20 gals sodium silicate + Premium cmt | 260 | 0% | 15.60 | 1.18 |
| | | | + 2% CaCl + 0.25 pps flocele | | | | |
| | | | Premium cmt + 2% CaCl | | | | |
| SURFACE | | | **NOTE: If well will circulate water to surface, option 2 will be utilized** | | | | |
| **Option 2** | LEAD | 1,530' | 65/35 Poz + 6% Gel + 10 pps gilsonite | 300 | 35% | 12.60 | 1.81 |
| | | | + 0.25 pps Flocele + 3% salt BWOW | | | | |
| | TAIL | 500' | Premium cmt + 2% CaCl | 150 | 35% | 15.60 | 1.18 |
| | | | + 0.25 pps flocele | | | | |
| | TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.60 | 1.18 |
| | | | | | | | |
| PRODUCTION | LEAD | 6,210' | Premium Lite II +0.25 pps | 540 | 40% | 11.00 | 3.38 |
| | | | celloflake + 5 pps gilsonite + 10% gel | | | | |
| | | | + 0.5% extender | | | | |
| | TAIL | 2,630' | 50/50 Poz/G + 10% salt + 2% gel | 650 | 40% | 14.30 | 1.31 |
| | | | + 0.1% R-3 | | | | |

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

| | |
|---|---|
| SURFACE | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used. |

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:** _____ **DATE:** _____
John Huycke / Emile Goodwin

**DRILLING SUPERINTENDENT:** _____ **DATE:** _____
John Merkel / Lovel Young

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 6 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT Report Date: 5/25/2010 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

FINISHED DRILLING FROM 1941' TO 8800' ON MAY 23, 2010. RAN 4 ½" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 585 SX CLASS G PREM LITE @ 11.7 PPG, 2.5 YD. TAILED CEMENT W/ 617 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 136 BBLS WATER, BUMPED PLUG, FLOATS HELD. RETURNED 15 BBLS CMT TO SURFACE. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #146 ON MAY 25, 2010 @ 19:00 HRS.

**Accepted by the Utah Division of Oil, Gas and Mining**

**FOR RECORD ONLY**

May 26, 2010

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Andy Lytle | 720 929-6100 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 5/26/2010 |

RECEIVED May 26, 2010

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 6 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT Report Date: 5/25/2010 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

FINISHED DRILLING FROM 1941' TO 8800' ON MAY 23, 2010. RAN 4 ½" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 585 SX CLASS G PREM LITE @ 11.7 PPG, 2.5 YD. TAILED CEMENT W/ 617 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 136 BBLS WATER, BUMPED PLUG, FLOATS HELD. RETURNED 15 BBLS CMT TO SURFACE. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #146 ON MAY 25, 2010 @ 19:00 HRS.

**Accepted by the Utah Division of Oil, Gas and Mining**

**FOR RECORD ONLY**

May 26, 2010

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Andy Lytle | 720 929-6100 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 5/26/2010 |

RECEIVED May 26, 2010

API Well No: 43047504540000

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
Bonanza 1023-6N1CS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047504540000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6007 Ext

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

**11.**
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT<br>Report Date:<br>7/22/2010 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ✓ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON JULY 22, 2010 AT 9:00 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
August 03, 2010

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Andy Lytle | 720 929-6100 | Regulatory Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 8/2/2010 |

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU38419

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator KERR-MCGEE OIL&GAS ONSHORE LP — Contact: GINA T BECKER — E-Mail: GINA.BECKER@ANADARKO.COM

8. Lease Name and Well No. BONANZA 1023-6N1CS

3. Address P.O. BOX 173779 DENVER, CO 80217

3a. Phone No. (include area code) Ph: 720-929-6086

9. API Well No. 43-047-50454

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NWSW 1550FSL 739FWL 39.97495 N Lat, 109.37550 W Lon

At top prod interval reported below SESW 962FSL 2140FWL

At total depth SESW 978FSL 2153FWL

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 6 T10S R23E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 04/07/2010

15. Date T.D. Reached 05/23/2010

16. Date Completed ☐ D & A ☒ Ready to Prod. 07/22/2010

17. Elevations (DF, KB, RT, GL)* 5144 GL

18. Total Depth: MD 8800 TVD 8495

19. Plug Back T.D.: MD 8750 TVD 8445

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL/GR/BHP/HDIL/ZDL/CN/GR

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

| Hole Size | Size/Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sks. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|---|---|---|---|---|---|---|---|---|---|
| 20.000 | 14.000 STEEL | 36.7 | | 40 | | 28 | | | |
| 11.000 | 8.625 IJ-55 | 28.0 | | 1919 | | 425 | | | |
| 7.875 | 4.500 I-80 | 11.6 | | 8789 | | 1202 | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

24. Tubing Record

| Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|---|---|---|---|---|---|---|---|---|
| 2.375 | 8416 | | | | | | | |

25. Producing Intervals

| Formation | Top | Bottom |
|---|---|---|
| A) MESAVERDE | 6684 | 8766 |
| B) | | |
| C) | | |
| D) | | |

26. Perforation Record

| Perforated Interval | Size | No. Holes | Perf. Status |
|---|---|---|---|
| 6684 TO 8766 | 0.360 | 333 | OPEN |
| | | | |
| | | | |
| | | | |

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material |
|---|---|
| 6684 TO 8766 | PUMP 10,041 BBLS SLICK H2O & 379,005 LBS 30/50 SAND. |
| | |
| | |
| | |

28. Production - Interval A

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| 07/22/2010 | 07/27/2010 | 24 | → | 0.0 | 2756.0 | 500.0 | | | FLOWS FROM WELL |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| 20/64 | 1900 | 2800.0 | → | 0 | 2756 | 500 | | PGW |

28a. Production - Interval B

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

*(See Instructions and spaces for additional data on reverse side)*

**ELECTRONIC SUBMISSION #91960 VERIFIED BY THE BLM WELL INFORMATION SYSTEM**
**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED**

RECEIVED
SEP 09 2010
DIV. OF OIL, GAS & MINING

28b. Production - Interval C

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

28c. Production - Interval D

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

| Formation | Top | Bottom | Descriptions, Contents, etc. | Name | Top Meas. Depth |
|---|---|---|---|---|---|
| GREEN RIVER | 1116 | | | | |
| BIRD'S NEST | 1377 | | | | |
| MAHOGANY | 1738 | | | | |
| WASATCH | 4313 | 6542 | | | |
| MESAVERDE | 6542 | 8800 | TD | | |

32. Additional remarks (include plugging procedure):

CHRONO DRILLING AND COMPLETION HISTORY AND DIRECTIONAL SURVEY ATTACHED.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #91960 Verified by the BLM Well Information System.**
**For KERR-MCGEE OIL&GAS ONSHORE,L.P, sent to the Vernal**

Name *(please print)* GINA T BECKER Title REGULATORY ANALYST II

Signature (Electronic Submission) Date 08/27/2010

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

Anadarko Petroleum Corporation

Project: UINTAH COUNTY, UTAH (nad 27)
Site: Bonanza 1023-6L Pad
Well: BONANZA 1023-6N1CS
Wellbore: BONANZA 1023-6N1CS
Section: SECTION 6 T10S R22E
SHL: 1550 FSL 739 FWL
Design: BONANZA 1023-6N1CS
Latitude: 39° 58' 29.809 N
Longitude: 109° 22' 31.811 W
GL: 5144.00
KB: WELL @ 5158.00ft (Original Well Elev)

Weatherford®

T M

Azimuths to True North
Magnetic North: 11.18°

Magnetic Field
Strength: 52458.1snT
Dip Angle: 65.92°
Date: 5/4/2010
Model: BGGM2009

**FORMATION TOP DETAILS**

| TVDPath | MDPath | Formation |
|---|---|---|
| 1116.00 | 1116.02 | GREEN RIVER |
| 4121.00 | 4290.19 | WASATCH |
| 7215.00 | 7525.12 | MESAVERDE |

**CASING DETAILS**

| TVD | MD | Name | Size |
|---|---|---|---|
| 1914.86 | 1914.90 | 8 5/8" | 8.62 |

**LEGEND**

- Bonanza 1023-6L EXISTING, Bonanza 1023-6L EXISTING, Bonanza 1023-6L EXISTING V0
- BONANZA 1023-6M1BS, BONANZA 1023-6M1BS, BONANZA 1023-6M1BS V0
- BONANZA 1023-6N1AS, BONANZA 1023-6N1AS, BONANZA 1023-6N1AS V0
- BONANZA 1023-6N1CS, BONANZA 1023-6N1CS, PLAN #1 3-15-10 RHS V0
- BONANZA 1023-6N4BS, BONANZA 1023-6N4BS, BONANZA 1023-6N4BS V0
- BONANZA 1023-6N4BS, BONANZA 1023-6N4BS, PLAN #1 3-15-10 RHS V0
- BONANZA 1023-6N1CS
- WEATHERFORD MWD SVY

**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Annotation |
|---|---|---|---|---|---|---|---|---|---|
| 1892.00 | 0.13 | 315.83 | 1891.96 | 1.41 | 6.20 | 0.00 | 0.00 | 5.18 | Start 123.04 hold at 1892.00 MD |
| 2015.04 | 0.13 | 315.83 | 2015.00 | 1.61 | 6.01 | 0.00 | 0.00 | 4.92 | Start DLS 3.00 TFO 157.16 |
| 2878.12 | 25.77 | 112.88 | 2849.40 | -71.90 | 181.19 | 3.00 | 157.16 | 194.90 | Start 2396.36 hold at 2878.12 MD |
| 5274.49 | 25.77 | 112.88 | 5007.39 | -477.01 | 1141.15 | 0.00 | 0.00 | 1236.83 | Start Drop -2.00 |
| 6563.12 | 0.00 | 0.00 | 6253.00 | -587.81 | 1403.69 | 2.00 | 180.00 | 1521.80 | Start 2173.00 hold at 6563.12 MD |
| 8736.12 | 0.00 | 0.00 | 8426.00 | -587.81 | 1403.69 | 0.00 | 0.00 | 1521.80 | TD at 8736.12 |

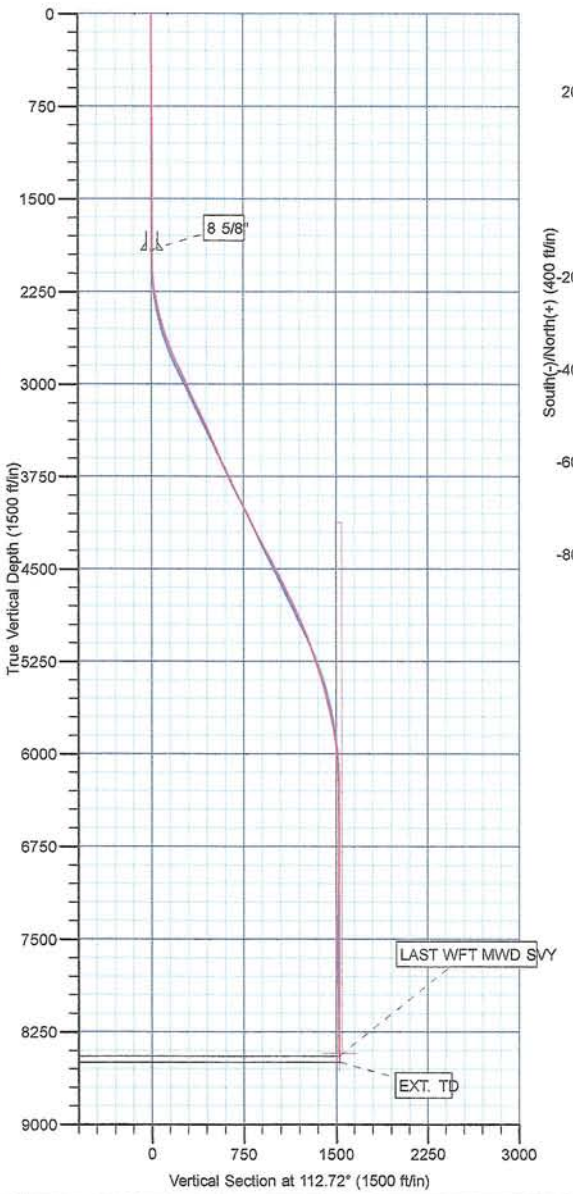
**WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)**

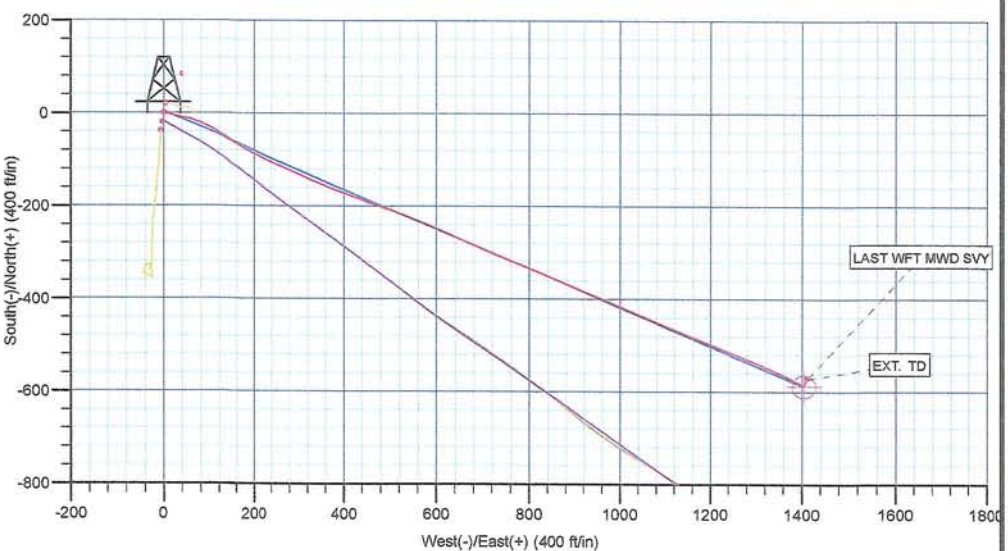
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|
| PBHL | 8426.00 | -587.81 | 1403.69 | 39° 58' 23.999 N | 109° 22' 13.778 W | Circle (Radius: 25.00) |

**WELL DETAILS: BONANZA 1023-6N1CS**

Ground Level: 5144.00

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 14521067.54 | 2095547.53 | 39° 58' 29.809 N | 109° 22' 31.811 W | |




Survey: WEATHERFORD MWD SVY (BONANZA 1023-6N1CS/BONANZA 1023-6N1CS)

Created By: Robert H. Scott Date: 8:12, May 24 2010

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

| | | | |
|---|---|---|---|
| **Project** | UINTAH COUNTY, UTAH (nad 27), | | |
| **Map System:** | Universal Transverse Mercator (US Survey Fee | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | Zone 12N (114 W to 108 W) | | |

| | | | | | |
|---|---|---|---|---|---|
| **Site** | Bonanza 1023-6L Pad, SECTION 6 T10S R22E | | | | |
| **Site Position:** | | **Northing:** | 14,521,029.19 ft | **Latitude:** | 39° 58' 29.431 N |
| **From:** | Lat/Long | **Easting:** | 2,095,542.07 ft | **Longitude:** | 109° 22' 31.890 W |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | in | **Grid Convergence:** | 1.04 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | BONANZA 1023-6N1CS | | | | | |
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 14,521,067.54 ft | **Latitude:** | 39° 58' 29.809 N |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,095,547.53 ft | **Longitude:** | 109° 22' 31.811 W |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,144.00 ft |

**Wellbore** BONANZA 1023-6N1CS

| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
|---|---|---|---|---|---|
| | BGGM2009 | 5/4/2010 | 11.18 | 65.92 | 52,458 |

**Design** BONANZA 1023-6N1CS

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.00 |

| **Vertical Section:** | **Depth From (TVD) (ft)** | **+N/-S (ft)** | **+E/-W (ft)** | **Direction (°)** |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 112.72 |

**Survey Program** **Date** 5/24/2010

| **From (ft)** | **To (ft)** | **Survey (Wellbore)** | **Tool Name** | **Description** |
|---|---|---|---|---|
| 236.00 | 8,800.00 | WEATHERFORD MWD SVY (BONANZA | MWD | MWD - Standard |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 236.00 | 0.44 | 118.20 | 236.00 | -0.43 | 0.80 | 0.90 | 0.19 | 0.19 | 0.00 |
| 332.00 | 0.31 | 144.95 | 332.00 | -0.82 | 1.27 | 1.49 | 0.22 | -0.14 | 27.86 |
| 459.00 | 0.13 | 111.95 | 458.99 | -1.15 | 1.60 | 1.92 | 0.17 | -0.14 | -25.98 |
| 650.00 | 0.31 | 80.58 | 649.99 | -1.15 | 2.31 | 2.58 | 0.11 | 0.09 | -16.42 |
| 841.00 | 0.44 | 110.33 | 840.99 | -1.32 | 3.51 | 3.75 | 0.12 | 0.07 | 15.58 |
| 1,032.00 | 0.44 | 109.83 | 1,031.98 | -1.82 | 4.89 | 5.21 | 0.00 | 0.00 | -0.26 |
| 1,223.00 | 0.25 | 209.08 | 1,222.98 | -2.43 | 5.38 | 5.90 | 0.28 | -0.10 | 51.96 |
| 1,319.00 | 0.19 | 178.95 | 1,318.98 | -2.78 | 5.28 | 5.94 | 0.13 | -0.06 | -31.39 |
| 1,415.00 | 0.38 | 37.58 | 1,414.98 | -2.68 | 5.47 | 6.09 | 0.56 | 0.20 | -147.26 |
| 1,606.00 | 1.00 | 9.33 | 1,605.97 | -0.54 | 6.13 | 5.86 | 0.36 | 0.32 | -14.79 |
| 1,702.00 | 0.44 | 359.33 | 1,701.96 | 0.66 | 6.26 | 5.52 | 0.60 | -0.58 | -10.42 |
| 1,828.00 | 0.13 | 359.08 | 1,827.96 | 1.29 | 6.25 | 5.27 | 0.25 | -0.25 | -0.20 |

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 1,892.00 | 0.13 | 315.83 | 1,891.96 | 1.41 | 6.20 | 5.18 | 0.15 | 0.00 | -67.58 |
| 1,959.00 | 0.56 | 248.81 | 1,958.95 | 1.35 | 5.84 | 4.87 | 0.78 | 0.64 | -100.03 |
| 2,050.00 | 2.13 | 124.83 | 2,049.94 | 0.22 | 6.82 | 6.20 | 2.73 | 1.73 | -136.24 |
| 2,140.00 | 5.44 | 110.43 | 2,139.73 | -2.22 | 12.19 | 12.10 | 3.80 | 3.68 | -16.00 |
| 2,231.00 | 8.81 | 104.31 | 2,230.01 | -5.45 | 22.99 | 23.31 | 3.79 | 3.70 | -6.73 |
| 2,322.00 | 12.19 | 100.06 | 2,319.48 | -8.86 | 39.21 | 39.58 | 3.81 | 3.71 | -4.67 |
| 2,412.00 | 13.75 | 104.43 | 2,407.18 | -13.18 | 58.92 | 59.44 | 2.05 | 1.73 | 4.86 |
| 2,503.00 | 15.00 | 114.18 | 2,495.34 | -20.70 | 80.14 | 81.92 | 2.99 | 1.37 | 10.71 |
| 2,594.00 | 17.50 | 118.81 | 2,582.71 | -32.12 | 102.88 | 107.30 | 3.09 | 2.75 | 5.09 |
| 2,685.00 | 21.50 | 120.81 | 2,668.47 | -47.26 | 129.20 | 137.43 | 4.46 | 4.40 | 2.20 |
| 2,775.00 | 24.06 | 120.43 | 2,751.44 | -65.00 | 159.19 | 171.94 | 2.85 | 2.84 | -0.42 |
| 2,866.00 | 24.57 | 115.20 | 2,834.38 | -82.46 | 192.31 | 209.23 | 2.43 | 0.56 | -5.75 |
| 2,957.00 | 25.63 | 115.31 | 2,916.79 | -98.93 | 227.22 | 247.80 | 1.17 | 1.16 | 0.12 |
| 3,047.00 | 24.94 | 112.68 | 2,998.16 | -114.57 | 262.32 | 286.22 | 1.46 | -0.77 | -2.92 |
| 3,138.00 | 25.50 | 113.43 | 3,080.49 | -129.75 | 298.00 | 324.99 | 0.71 | 0.62 | 0.82 |
| 3,229.00 | 24.63 | 112.81 | 3,162.92 | -144.89 | 333.45 | 363.54 | 1.00 | -0.96 | -0.68 |
| 3,319.00 | 24.88 | 112.06 | 3,244.65 | -159.27 | 368.29 | 401.23 | 0.45 | 0.28 | -0.83 |
| 3,410.00 | 25.63 | 109.43 | 3,326.95 | -173.01 | 404.59 | 440.02 | 1.48 | 0.82 | -2.89 |
| 3,501.00 | 24.31 | 109.93 | 3,409.45 | -185.94 | 440.76 | 478.38 | 1.47 | -1.45 | 0.55 |
| 3,591.00 | 23.31 | 109.31 | 3,491.79 | -198.15 | 474.98 | 514.66 | 1.15 | -1.11 | -0.69 |
| 3,682.00 | 23.31 | 110.06 | 3,575.36 | -210.28 | 508.89 | 550.62 | 0.33 | 0.00 | 0.82 |
| 3,772.00 | 23.65 | 111.36 | 3,657.91 | -222.96 | 542.43 | 586.45 | 0.69 | 0.38 | 1.44 |
| 3,863.00 | 23.56 | 112.81 | 3,741.29 | -236.66 | 576.19 | 622.88 | 0.65 | -0.10 | 1.59 |
| 3,953.00 | 26.75 | 113.56 | 3,822.75 | -251.73 | 611.35 | 661.13 | 3.56 | 3.54 | 0.83 |
| 4,044.00 | 27.81 | 114.93 | 3,903.63 | -268.87 | 649.37 | 702.82 | 1.35 | 1.16 | 1.51 |
| 4,135.00 | 26.38 | 113.93 | 3,984.64 | -286.01 | 687.10 | 744.25 | 1.65 | -1.57 | -1.10 |
| 4,225.00 | 25.38 | 111.93 | 4,065.61 | -301.33 | 723.27 | 783.53 | 1.47 | -1.11 | -2.22 |
| 4,316.00 | 26.13 | 112.31 | 4,147.57 | -316.22 | 759.90 | 823.07 | 0.84 | 0.82 | 0.42 |
| 4,407.00 | 28.69 | 112.93 | 4,228.35 | -332.34 | 798.56 | 864.96 | 2.83 | 2.81 | 0.68 |
| 4,497.00 | 28.75 | 112.68 | 4,307.28 | -349.10 | 838.43 | 908.20 | 0.15 | 0.07 | -0.28 |
| 4,588.00 | 27.94 | 112.56 | 4,387.36 | -365.72 | 878.31 | 951.41 | 0.89 | -0.89 | -0.13 |
| 4,678.00 | 26.75 | 111.81 | 4,467.31 | -381.33 | 916.59 | 992.75 | 1.38 | -1.32 | -0.83 |
| 4,769.00 | 26.81 | 112.18 | 4,548.55 | -396.69 | 954.60 | 1,033.74 | 0.19 | 0.07 | 0.41 |
| 4,860.00 | 25.13 | 112.31 | 4,630.35 | -411.77 | 991.49 | 1,073.59 | 1.85 | -1.85 | 0.14 |
| 4,950.00 | 26.50 | 113.31 | 4,711.37 | -426.98 | 1,027.61 | 1,112.78 | 1.60 | 1.52 | 1.11 |
| 5,041.00 | 25.44 | 112.56 | 4,793.18 | -442.51 | 1,064.30 | 1,152.63 | 1.22 | -1.16 | -0.82 |
| 5,132.00 | 24.00 | 112.06 | 4,875.84 | -456.96 | 1,099.51 | 1,190.68 | 1.60 | -1.58 | -0.55 |
| 5,222.00 | 22.75 | 112.81 | 4,958.45 | -470.58 | 1,132.51 | 1,226.38 | 1.43 | -1.39 | 0.83 |
| 5,313.00 | 21.38 | 111.43 | 5,042.79 | -483.46 | 1,164.17 | 1,260.56 | 1.61 | -1.51 | -1.52 |
| 5,404.00 | 19.69 | 111.31 | 5,128.00 | -495.09 | 1,193.90 | 1,292.48 | 1.86 | -1.86 | -0.13 |
| 5,494.00 | 18.00 | 111.43 | 5,213.17 | -505.69 | 1,220.97 | 1,321.54 | 1.88 | -1.88 | 0.13 |
| 5,585.00 | 18.31 | 111.68 | 5,299.64 | -516.10 | 1,247.34 | 1,349.89 | 0.35 | 0.34 | 0.27 |
| 5,676.00 | 17.06 | 112.43 | 5,386.34 | -526.48 | 1,272.96 | 1,377.53 | 1.40 | -1.37 | 0.82 |
| 5,766.00 | 15.44 | 112.47 | 5,472.74 | -536.09 | 1,296.24 | 1,402.71 | 1.80 | -1.80 | 0.04 |
| 5,857.00 | 14.06 | 114.18 | 5,560.74 | -545.25 | 1,317.52 | 1,425.88 | 1.59 | -1.52 | 1.88 |
| 5,948.00 | 13.19 | 112.81 | 5,649.18 | -553.80 | 1,337.17 | 1,447.31 | 1.02 | -0.96 | -1.51 |
| 6,039.00 | 11.19 | 115.56 | 5,738.13 | -561.64 | 1,354.71 | 1,466.51 | 2.29 | -2.20 | 3.02 |
| 6,129.00 | 9.50 | 114.93 | 5,826.66 | -568.54 | 1,369.33 | 1,482.66 | 1.88 | -1.88 | -0.70 |
| 6,220.00 | 7.81 | 116.68 | 5,916.62 | -574.48 | 1,381.66 | 1,496.33 | 1.88 | -1.86 | 1.92 |
| 6,310.00 | 5.13 | 117.18 | 6,006.04 | -579.07 | 1,390.71 | 1,506.44 | 2.98 | -2.98 | 0.56 |
| 6,401.00 | 2.75 | 124.68 | 6,096.82 | -582.17 | 1,396.12 | 1,512.64 | 2.67 | -2.62 | 8.24 |
| 6,492.00 | 3.25 | 126.56 | 6,187.69 | -584.95 | 1,399.99 | 1,517.28 | 0.56 | 0.55 | 2.07 |
| 6,582.00 | 0.81 | 186.31 | 6,277.63 | -587.10 | 1,401.97 | 1,519.93 | 3.25 | -2.71 | 66.39 |
| 6,673.00 | 0.50 | 182.93 | 6,368.63 | -588.13 | 1,401.88 | 1,520.25 | 0.34 | -0.34 | -3.71 |

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 6,763.00 | 2.50 | 31.06 | 6,458.60 | -586.84 | 1,402.87 | 1,520.67 | 3.28 | 2.22 | -168.74 |
| 6,854.00 | 2.06 | 37.31 | 6,549.53 | -583.84 | 1,404.89 | 1,521.37 | 0.55 | -0.48 | 6.87 |
| 6,945.00 | 1.75 | 29.06 | 6,640.48 | -581.33 | 1,406.55 | 1,521.93 | 0.45 | -0.34 | -9.07 |
| 7,035.00 | 1.38 | 36.56 | 6,730.45 | -579.26 | 1,407.86 | 1,522.34 | 0.47 | -0.41 | 8.33 |
| 7,126.00 | 1.63 | 1.68 | 6,821.42 | -577.08 | 1,408.56 | 1,522.14 | 1.03 | 0.27 | -38.33 |
| 7,217.00 | 0.75 | 5.31 | 6,912.40 | -575.20 | 1,408.65 | 1,521.50 | 0.97 | -0.97 | 3.99 |
| 7,307.00 | 0.94 | 19.56 | 7,002.39 | -573.91 | 1,408.95 | 1,521.28 | 0.31 | 0.21 | 15.83 |
| 7,398.00 | 1.30 | 327.38 | 7,093.37 | -572.34 | 1,408.64 | 1,520.39 | 1.14 | 0.40 | -57.34 |
| 7,489.00 | 1.19 | 337.68 | 7,184.35 | -570.60 | 1,407.73 | 1,518.87 | 0.27 | -0.12 | 11.32 |
| 7,579.00 | 1.06 | 333.18 | 7,274.33 | -568.99 | 1,407.00 | 1,517.58 | 0.17 | -0.14 | -5.00 |
| 7,670.00 | 0.94 | 328.31 | 7,365.32 | -567.60 | 1,406.23 | 1,516.33 | 0.16 | -0.13 | -5.35 |
| 7,761.00 | 0.63 | 351.93 | 7,456.31 | -566.47 | 1,405.76 | 1,515.47 | 0.49 | -0.34 | 25.96 |
| 7,852.00 | 0.13 | 42.06 | 7,547.31 | -565.90 | 1,405.76 | 1,515.25 | 0.61 | -0.55 | 55.09 |
| 7,942.00 | 0.31 | 91.93 | 7,637.31 | -565.83 | 1,406.07 | 1,515.51 | 0.27 | 0.20 | 55.41 |
| 8,033.00 | 0.19 | 79.43 | 7,728.31 | -565.81 | 1,406.47 | 1,515.86 | 0.14 | -0.13 | -13.74 |
| 8,124.00 | 0.06 | 121.43 | 7,819.31 | -565.81 | 1,406.66 | 1,516.04 | 0.17 | -0.14 | 46.15 |
| 8,215.00 | 0.63 | 97.68 | 7,910.31 | -565.90 | 1,407.19 | 1,516.57 | 0.63 | 0.63 | -26.10 |
| 8,305.00 | 0.81 | 133.06 | 8,000.30 | -566.40 | 1,408.15 | 1,517.64 | 0.52 | 0.20 | 39.31 |
| 8,396.00 | 0.63 | 114.56 | 8,091.29 | -567.05 | 1,409.07 | 1,518.75 | 0.32 | -0.20 | -20.33 |
| 8,487.00 | 0.63 | 138.43 | 8,182.29 | -567.63 | 1,409.86 | 1,519.70 | 0.29 | 0.00 | 26.23 |
| 8,577.00 | 0.63 | 114.56 | 8,272.28 | -568.21 | 1,410.64 | 1,520.64 | 0.29 | 0.00 | -26.52 |
| 8,668.00 | 1.56 | 133.43 | 8,363.26 | -569.27 | 1,411.99 | 1,522.29 | 1.08 | 1.02 | 20.74 |
| **LAST WFT MWD SVY** | | | | | | | | | |
| 8,750.00 | 1.64 | 149.72 | 8,445.23 | -571.05 | 1,413.40 | 1,524.28 | 0.56 | 0.10 | 19.87 |
| **EXT. TD** | | | | | | | | | |
| 8,800.00 | 1.64 | 149.72 | 8,495.21 | -572.28 | 1,414.12 | 1,525.42 | 0.00 | 0.00 | 0.00 |

**Survey Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 8,750.00 | 8,445.23 | -571.05 | 1,413.40 | LAST WFT MWD SVY |
| 8,800.00 | 8,495.21 | -572.28 | 1,414.12 | EXT. TD |

Checked By: _____ Approved By: _____ Date: _____

Anadarko
Petroleum Corporation

# ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)**
**Bonanza 1023-6L Pad**
**BONANZA 1023-6N1CS**

**BONANZA 1023-6N1CS**

**Survey: WEATHERFORD MWD SVY**

# Survey Report - Geographic

**24 May, 2010**

Weatherford®

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Project** UINTAH COUNTY, UTAH (nad 27),

| | | | |
|---|---|---|---|
| **Map System:** | Universal Transverse Mercator (US Survey Fee | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | Zone 12N (114 W to 108 W) | | |

**Site** Bonanza 1023-6L Pad, SECTION 6 T10S R22E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 14,521,029.19 ft | **Latitude:** | 39° 58' 29.431 N |
| **From:** | Lat/Long | **Easting:** | 2,095,542.07 ft | **Longitude:** | 109° 22' 31.890 W |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | in | **Grid Convergence:** | 1.04 ° |

**Well** BONANZA 1023-6N1CS

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 14,521,067.54 ft | **Latitude:** | 39° 58' 29.809 N |
| | **+E/-W** | 0.00 ft | **Easting:** | 2,095,547.53 ft | **Longitude:** | 109° 22' 31.811 W |
| **Position Uncertainty** | | 0.00 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 5,144.00 ft |

**Wellbore** BONANZA 1023-6N1CS

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | BGGM2009 | 5/4/2010 | 11.18 | 65.92 | 52,458 |

**Design** BONANZA 1023-6N1CS

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 112.72 |

**Survey Program** **Date** 5/24/2010

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 236.00 | 8,800.00 | WEATHERFORD MWD SVY (BONANZA | MWD | MWD - Standard |

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14,521,067.54 | 2,095,547.53 | 39° 58' 29.809 N | 109° 22' 31.811 W |
| 236.00 | 0.44 | 118.20 | 236.00 | -0.43 | 0.80 | 14,521,067.12 | 2,095,548.34 | 39° 58' 29.805 N | 109° 22' 31.801 W |
| 332.00 | 0.31 | 144.95 | 332.00 | -0.82 | 1.27 | 14,521,066.75 | 2,095,548.82 | 39° 58' 29.801 N | 109° 22' 31.794 W |
| 459.00 | 0.13 | 111.95 | 458.99 | -1.15 | 1.60 | 14,521,066.42 | 2,095,549.16 | 39° 58' 29.798 N | 109° 22' 31.790 W |
| 650.00 | 0.31 | 80.58 | 649.99 | -1.15 | 2.31 | 14,521,066.43 | 2,095,549.87 | 39° 58' 29.798 N | 109° 22' 31.781 W |
| 841.00 | 0.44 | 110.33 | 840.99 | -1.32 | 3.51 | 14,521,066.28 | 2,095,551.07 | 39° 58' 29.796 N | 109° 22' 31.766 W |
| 1,032.00 | 0.44 | 109.83 | 1,031.98 | -1.82 | 4.89 | 14,521,065.81 | 2,095,552.46 | 39° 58' 29.791 N | 109° 22' 31.748 W |
| 1,223.00 | 0.25 | 209.08 | 1,222.98 | -2.43 | 5.38 | 14,521,065.20 | 2,095,552.95 | 39° 58' 29.785 N | 109° 22' 31.742 W |
| 1,319.00 | 0.19 | 178.95 | 1,318.98 | -2.78 | 5.28 | 14,521,064.86 | 2,095,552.86 | 39° 58' 29.782 N | 109° 22' 31.743 W |
| 1,415.00 | 0.38 | 37.58 | 1,414.98 | -2.68 | 5.47 | 14,521,064.96 | 2,095,553.06 | 39° 58' 29.783 N | 109° 22' 31.740 W |
| 1,606.00 | 1.00 | 9.33 | 1,605.97 | -0.54 | 6.13 | 14,521,067.11 | 2,095,553.67 | 39° 58' 29.804 N | 109° 22' 31.732 W |
| 1,702.00 | 0.44 | 359.33 | 1,701.96 | 0.66 | 6.26 | 14,521,068.31 | 2,095,553.78 | 39° 58' 29.816 N | 109° 22' 31.730 W |
| 1,828.00 | 0.13 | 359.08 | 1,827.96 | 1.29 | 6.25 | 14,521,068.94 | 2,095,553.76 | 39° 58' 29.822 N | 109° 22' 31.730 W |
| 1,892.00 | 0.13 | 315.83 | 1,891.96 | 1.41 | 6.20 | 14,521,069.06 | 2,095,553.71 | 39° 58' 29.823 N | 109° 22' 31.731 W |
| 1,959.00 | 0.56 | 248.81 | 1,958.95 | 1.35 | 5.84 | 14,521,068.99 | 2,095,553.35 | 39° 58' 29.823 N | 109° 22' 31.736 W |
| 2,050.00 | 2.13 | 124.83 | 2,049.94 | 0.22 | 6.82 | 14,521,067.88 | 2,095,554.35 | 39° 58' 29.811 N | 109° 22' 31.723 W |
| 2,140.00 | 5.44 | 110.43 | 2,139.73 | -2.22 | 12.19 | 14,521,065.54 | 2,095,559.76 | 39° 58' 29.787 N | 109° 22' 31.654 W |
| 2,231.00 | 8.81 | 104.31 | 2,230.01 | -5.45 | 22.99 | 14,521,062.50 | 2,095,570.62 | 39° 58' 29.755 N | 109° 22' 31.515 W |
| 2,322.00 | 12.19 | 100.06 | 2,319.48 | -8.86 | 39.21 | 14,521,059.40 | 2,095,586.90 | 39° 58' 29.722 N | 109° 22' 31.307 W |
| 2,412.00 | 13.75 | 104.43 | 2,407.18 | -13.18 | 58.92 | 14,521,055.43 | 2,095,606.69 | 39° 58' 29.679 N | 109° 22' 31.054 W |
| 2,503.00 | 15.00 | 114.18 | 2,495.34 | -20.70 | 80.14 | 14,521,048.30 | 2,095,628.04 | 39° 58' 29.605 N | 109° 22' 30.781 W |
| 2,594.00 | 17.50 | 118.81 | 2,582.71 | -32.12 | 102.88 | 14,521,037.30 | 2,095,650.98 | 39° 58' 29.492 N | 109° 22' 30.489 W |
| 2,685.00 | 21.50 | 120.81 | 2,668.47 | -47.26 | 129.20 | 14,521,022.64 | 2,095,677.57 | 39° 58' 29.342 N | 109° 22' 30.151 W |
| 2,775.00 | 24.06 | 120.43 | 2,751.44 | -65.00 | 159.19 | 14,521,005.44 | 2,095,707.88 | 39° 58' 29.167 N | 109° 22' 29.766 W |
| 2,866.00 | 24.57 | 115.20 | 2,834.38 | -82.46 | 192.31 | 14,520,988.60 | 2,095,741.31 | 39° 58' 28.994 N | 109° 22' 29.340 W |
| 2,957.00 | 25.63 | 115.31 | 2,916.79 | -98.93 | 227.22 | 14,520,972.77 | 2,095,776.52 | 39° 58' 28.831 N | 109° 22' 28.892 W |
| 3,047.00 | 24.94 | 112.68 | 2,998.16 | -114.57 | 262.32 | 14,520,957.77 | 2,095,811.90 | 39° 58' 28.677 N | 109° 22' 28.441 W |
| 3,138.00 | 25.50 | 113.43 | 3,080.49 | -129.75 | 298.00 | 14,520,943.24 | 2,095,847.85 | 39° 58' 28.527 N | 109° 22' 27.982 W |
| 3,229.00 | 24.63 | 112.81 | 3,162.92 | -144.89 | 333.45 | 14,520,928.74 | 2,095,883.57 | 39° 58' 28.377 N | 109° 22' 27.527 W |
| 3,319.00 | 24.88 | 112.06 | 3,244.65 | -159.27 | 368.29 | 14,520,915.00 | 2,095,918.66 | 39° 58' 28.235 N | 109° 22' 27.080 W |
| 3,410.00 | 25.63 | 109.43 | 3,326.95 | -173.01 | 404.59 | 14,520,901.93 | 2,095,955.21 | 39° 58' 28.099 N | 109° 22' 26.613 W |
| 3,501.00 | 24.31 | 109.93 | 3,409.45 | -185.94 | 440.76 | 14,520,889.65 | 2,095,991.61 | 39° 58' 27.971 N | 109° 22' 26.148 W |
| 3,591.00 | 23.31 | 109.31 | 3,491.79 | -198.15 | 474.98 | 14,520,878.08 | 2,096,026.05 | 39° 58' 27.851 N | 109° 22' 25.709 W |
| 3,682.00 | 23.31 | 110.06 | 3,575.36 | -210.28 | 508.89 | 14,520,866.57 | 2,096,060.17 | 39° 58' 27.731 N | 109° 22' 25.273 W |
| 3,772.00 | 23.65 | 111.36 | 3,657.91 | -222.96 | 542.43 | 14,520,854.50 | 2,096,093.93 | 39° 58' 27.605 N | 109° 22' 24.842 W |
| 3,863.00 | 23.56 | 112.81 | 3,741.29 | -236.66 | 576.19 | 14,520,841.42 | 2,096,127.94 | 39° 58' 27.470 N | 109° 22' 24.409 W |
| 3,953.00 | 26.75 | 113.56 | 3,822.75 | -251.73 | 611.35 | 14,520,826.99 | 2,096,163.36 | 39° 58' 27.321 N | 109° 22' 23.957 W |
| 4,044.00 | 27.81 | 114.93 | 3,903.63 | -268.87 | 649.37 | 14,520,810.55 | 2,096,201.69 | 39° 58' 27.152 N | 109° 22' 23.469 W |
| 4,135.00 | 26.38 | 113.93 | 3,984.64 | -286.01 | 687.10 | 14,520,794.09 | 2,096,239.73 | 39° 58' 26.982 N | 109° 22' 22.984 W |
| 4,225.00 | 25.38 | 111.93 | 4,065.61 | -301.33 | 723.27 | 14,520,779.44 | 2,096,276.17 | 39° 58' 26.831 N | 109° 22' 22.519 W |
| 4,316.00 | 26.13 | 112.31 | 4,147.57 | -316.22 | 759.90 | 14,520,765.22 | 2,096,313.07 | 39° 58' 26.684 N | 109° 22' 22.049 W |
| 4,407.00 | 28.69 | 112.93 | 4,228.35 | -332.34 | 798.56 | 14,520,749.80 | 2,096,352.02 | 39° 58' 26.524 N | 109° 22' 21.552 W |
| 4,497.00 | 28.75 | 112.68 | 4,307.28 | -349.10 | 838.43 | 14,520,733.77 | 2,096,392.18 | 39° 58' 26.358 N | 109° 22' 21.040 W |
| 4,588.00 | 27.94 | 112.56 | 4,387.36 | -365.72 | 878.31 | 14,520,717.88 | 2,096,432.36 | 39° 58' 26.194 N | 109° 22' 20.528 W |
| 4,678.00 | 26.75 | 111.81 | 4,467.31 | -381.33 | 916.59 | 14,520,702.97 | 2,096,470.92 | 39° 58' 26.040 N | 109° 22' 20.036 W |
| 4,769.00 | 26.81 | 112.18 | 4,548.55 | -396.69 | 954.60 | 14,520,688.30 | 2,096,509.21 | 39° 58' 25.888 N | 109° 22' 19.547 W |
| 4,860.00 | 25.13 | 112.31 | 4,630.35 | -411.77 | 991.49 | 14,520,673.90 | 2,096,546.36 | 39° 58' 25.739 N | 109° 22' 19.074 W |
| 4,950.00 | 26.50 | 113.31 | 4,711.37 | -426.98 | 1,027.61 | 14,520,659.36 | 2,096,582.75 | 39° 58' 25.589 N | 109° 22' 18.610 W |
| 5,041.00 | 25.44 | 112.56 | 4,793.18 | -442.51 | 1,064.30 | 14,520,644.49 | 2,096,619.72 | 39° 58' 25.435 N | 109° 22' 18.138 W |
| 5,132.00 | 24.00 | 112.06 | 4,875.84 | -456.96 | 1,099.51 | 14,520,630.69 | 2,096,655.18 | 39° 58' 25.292 N | 109° 22' 17.686 W |
| 5,222.00 | 22.75 | 112.81 | 4,958.45 | -470.58 | 1,132.51 | 14,520,617.67 | 2,096,688.43 | 39° 58' 25.158 N | 109° 22' 17.262 W |
| 5,313.00 | 21.38 | 111.43 | 5,042.79 | -483.46 | 1,164.17 | 14,520,605.37 | 2,096,720.32 | 39° 58' 25.030 N | 109° 22' 16.855 W |
| 5,404.00 | 19.69 | 111.31 | 5,128.00 | -495.09 | 1,193.90 | 14,520,594.28 | 2,096,750.25 | 39° 58' 24.915 N | 109° 22' 16.473 W |
| 5,494.00 | 18.00 | 111.43 | 5,213.17 | -505.69 | 1,220.97 | 14,520,584.18 | 2,096,777.51 | 39° 58' 24.811 N | 109° 22' 16.126 W |
| 5,585.00 | 18.31 | 111.68 | 5,299.64 | -516.10 | 1,247.34 | 14,520,574.25 | 2,096,804.07 | 39° 58' 24.708 N | 109° 22' 15.787 W |

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 5,676.00 | 17.06 | 112.43 | 5,386.34 | -526.48 | 1,272.96 | 14,520,564.34 | 2,096,829.88 | 39° 58' 24.605 N | 109° 22' 15.458 W |
| 5,766.00 | 15.44 | 112.47 | 5,472.74 | -536.09 | 1,296.24 | 14,520,555.15 | 2,096,853.32 | 39° 58' 24.510 N | 109° 22' 15.159 W |
| 5,857.00 | 14.06 | 114.18 | 5,560.74 | -545.25 | 1,317.52 | 14,520,546.38 | 2,096,874.77 | 39° 58' 24.420 N | 109° 22' 14.885 W |
| 5,948.00 | 13.19 | 112.81 | 5,649.18 | -553.80 | 1,337.17 | 14,520,538.19 | 2,096,894.57 | 39° 58' 24.335 N | 109° 22' 14.633 W |
| 6,039.00 | 11.19 | 115.56 | 5,738.13 | -561.64 | 1,354.71 | 14,520,530.67 | 2,096,912.25 | 39° 58' 24.258 N | 109° 22' 14.408 W |
| 6,129.00 | 9.50 | 114.93 | 5,826.66 | -568.54 | 1,369.33 | 14,520,524.04 | 2,096,926.99 | 39° 58' 24.189 N | 109° 22' 14.220 W |
| 6,220.00 | 7.81 | 116.68 | 5,916.62 | -574.48 | 1,381.66 | 14,520,518.32 | 2,096,939.43 | 39° 58' 24.131 N | 109° 22' 14.061 W |
| 6,310.00 | 5.13 | 117.18 | 6,006.04 | -579.07 | 1,390.71 | 14,520,513.91 | 2,096,948.56 | 39° 58' 24.085 N | 109° 22' 13.945 W |
| 6,401.00 | 2.75 | 124.68 | 6,096.82 | -582.17 | 1,396.12 | 14,520,510.90 | 2,096,954.03 | 39° 58' 24.055 N | 109° 22' 13.876 W |
| 6,492.00 | 3.25 | 126.56 | 6,187.69 | -584.95 | 1,399.99 | 14,520,508.20 | 2,096,957.94 | 39° 58' 24.027 N | 109° 22' 13.826 W |
| 6,582.00 | 0.81 | 186.31 | 6,277.63 | -587.10 | 1,401.97 | 14,520,506.08 | 2,096,959.96 | 39° 58' 24.006 N | 109° 22' 13.801 W |
| 6,673.00 | 0.50 | 182.93 | 6,368.63 | -588.13 | 1,401.88 | 14,520,505.04 | 2,096,959.89 | 39° 58' 23.996 N | 109° 22' 13.802 W |
| 6,763.00 | 2.50 | 31.06 | 6,458.60 | -586.84 | 1,402.87 | 14,520,506.35 | 2,096,960.86 | 39° 58' 24.008 N | 109° 22' 13.789 W |
| 6,854.00 | 2.06 | 37.31 | 6,549.53 | -583.84 | 1,404.89 | 14,520,509.39 | 2,096,962.82 | 39° 58' 24.038 N | 109° 22' 13.763 W |
| 6,945.00 | 1.75 | 29.06 | 6,640.48 | -581.33 | 1,406.55 | 14,520,511.93 | 2,096,964.44 | 39° 58' 24.063 N | 109° 22' 13.742 W |
| 7,035.00 | 1.38 | 36.56 | 6,730.45 | -579.26 | 1,407.86 | 14,520,514.03 | 2,096,965.72 | 39° 58' 24.083 N | 109° 22' 13.725 W |
| 7,126.00 | 1.63 | 1.68 | 6,821.42 | -577.08 | 1,408.56 | 14,520,516.21 | 2,096,966.37 | 39° 58' 24.105 N | 109° 22' 13.716 W |
| 7,217.00 | 0.75 | 5.31 | 6,912.40 | -575.20 | 1,408.65 | 14,520,518.10 | 2,096,966.43 | 39° 58' 24.124 N | 109° 22' 13.715 W |
| 7,307.00 | 0.94 | 19.56 | 7,002.39 | -573.91 | 1,408.95 | 14,520,519.39 | 2,096,966.70 | 39° 58' 24.136 N | 109° 22' 13.711 W |
| 7,398.00 | 1.30 | 327.38 | 7,093.37 | -572.34 | 1,408.64 | 14,520,520.96 | 2,096,966.37 | 39° 58' 24.152 N | 109° 22' 13.715 W |
| 7,489.00 | 1.19 | 337.68 | 7,184.35 | -570.60 | 1,407.73 | 14,520,522.68 | 2,096,965.42 | 39° 58' 24.169 N | 109° 22' 13.727 W |
| 7,579.00 | 1.06 | 333.18 | 7,274.33 | -568.99 | 1,407.00 | 14,520,524.28 | 2,096,964.66 | 39° 58' 24.185 N | 109° 22' 13.736 W |
| 7,670.00 | 0.94 | 328.31 | 7,365.32 | -567.60 | 1,406.23 | 14,520,525.65 | 2,096,963.86 | 39° 58' 24.199 N | 109° 22' 13.746 W |
| 7,761.00 | 0.63 | 351.93 | 7,456.31 | -566.47 | 1,405.76 | 14,520,526.77 | 2,096,963.38 | 39° 58' 24.210 N | 109° 22' 13.752 W |
| 7,852.00 | 0.13 | 42.06 | 7,547.31 | -565.90 | 1,405.76 | 14,520,527.34 | 2,096,963.37 | 39° 58' 24.215 N | 109° 22' 13.752 W |
| 7,942.00 | 0.31 | 91.93 | 7,637.31 | -565.83 | 1,406.07 | 14,520,527.42 | 2,096,963.68 | 39° 58' 24.216 N | 109° 22' 13.748 W |
| 8,033.00 | 0.19 | 79.43 | 7,728.31 | -565.81 | 1,406.47 | 14,520,527.44 | 2,096,964.07 | 39° 58' 24.216 N | 109° 22' 13.743 W |
| 8,124.00 | 0.06 | 121.43 | 7,819.31 | -565.81 | 1,406.66 | 14,520,527.45 | 2,096,964.26 | 39° 58' 24.216 N | 109° 22' 13.740 W |
| 8,215.00 | 0.63 | 97.68 | 7,910.31 | -565.90 | 1,407.19 | 14,520,527.37 | 2,096,964.80 | 39° 58' 24.215 N | 109° 22' 13.733 W |
| 8,305.00 | 0.81 | 133.06 | 8,000.30 | -566.40 | 1,408.15 | 14,520,526.88 | 2,096,965.77 | 39° 58' 24.210 N | 109° 22' 13.721 W |
| 8,396.00 | 0.63 | 114.56 | 8,091.29 | -567.05 | 1,409.07 | 14,520,526.25 | 2,096,966.70 | 39° 58' 24.204 N | 109° 22' 13.709 W |
| 8,487.00 | 0.63 | 138.43 | 8,182.29 | -567.63 | 1,409.86 | 14,520,525.69 | 2,096,967.50 | 39° 58' 24.198 N | 109° 22' 13.699 W |
| 8,577.00 | 0.63 | 114.56 | 8,272.28 | -568.21 | 1,410.64 | 14,520,525.12 | 2,096,968.29 | 39° 58' 24.193 N | 109° 22' 13.689 W |
| 8,668.00 | 1.56 | 133.43 | 8,363.26 | -569.27 | 1,411.99 | 14,520,524.09 | 2,096,969.66 | 39° 58' 24.182 N | 109° 22' 13.672 W |
| **LAST WFT MWD SVY** | | | | | | | | | |
| 8,750.00 | 1.64 | 149.72 | 8,445.23 | -571.05 | 1,413.40 | 14,520,522.34 | 2,096,971.10 | 39° 58' 24.165 N | 109° 22' 13.654 W |
| **EXT. TD** | | | | | | | | | |
| 8,800.00 | 1.64 | 149.72 | 8,495.21 | -572.28 | 1,414.12 | 14,520,521.11 | 2,096,971.84 | 39° 58' 24.152 N | 109° 22' 13.644 W |

| | | | |
|---|---|---|---|
| **Company:** | ANADARKO PETROLEUM CORP. | **Local Co-ordinate Reference:** | Well BONANZA 1023-6N1CS |
| **Project:** | UINTAH COUNTY, UTAH (nad 27) | **TVD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Site:** | Bonanza 1023-6L Pad | **MD Reference:** | WELL @ 5158.00ft (Original Well Elev) |
| **Well:** | BONANZA 1023-6N1CS | **North Reference:** | True |
| **Wellbore:** | BONANZA 1023-6N1CS | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | BONANZA 1023-6N1CS | **Database:** | EDM 2003.21 Single User Db |

**Survey Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 8,750.00 | 8,445.23 | -571.05 | 1,413.40 | LAST WFT MWD SVY |
| 8,800.00 | 8,495.21 | -572.28 | 1,414.12 | EXT. TD |

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ENSIGN 146/146, CAPSTAR 310/310 |
| Event: DRILLING | Start Date: 4/8/2010 | End Date: 5/25/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Leve | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 4/11/2010 | 20:30 - 21:30 | 1.00 | RDMO | 01 | E | P | | RIG DOWN RIG.LOWER DERICK. |
| | 21:30 - 23:30 | 2.00 | MIRU | 01 | A | P | | HOLD SAFETY MEETING, MOVE RIG OVER #2 OF 4 HOLES ON PAD. W 2 TRUCKS. |
| | 23:30 - 0:00 | 0.50 | MIRU | 01 | B | P | | RIG UP RIG. |
| 4/12/2010 | 0:00 - 0:30 | 0.50 | MIRU | 01 | B | P | | RIG UP RIG. |
| | 0:30 - 3:30 | 3.00 | MIRU | 14 | A | P | | WELD ON RISER, INSTALL BOWIE LINE. PRIME PIT PUMP, FILL PITS, INSPECT RIG. P/U 1.5 DEG BENT HOUSE MOTOR 7/8 LOBE 4 STAGE .16 RPG. M/U BIT #1 Q507F SN 7020055. (6TH RUN). INSTALL ROT HEAD RUBBER. |
| | 3:30 - 5:30 | 2.00 | DRLSUR | 02 | B | P | | DRILL 49'-184' W/ MOTOR AND BIT. SPUD 4/12/2010 03:30 |
| | 5:30 - 8:00 | 2.50 | DRLSUR | 06 | A | P | | LD 6" DC'S, P/U DIRECTIONAL TOOLS , INSTALL ROT HEAD RUBBER. |
| | 8:00 - 18:00 | 10.00 | DRLSUR | 02 | D | P | | DRILL W/ MWD 184'- 1411' (1227',123'/HR)WOB 8-12K, RPM 50, MOT RPM 88, GPM 550, ON/OFF PSI 950/700'. UP/DOWN/ROT45/42/40. LOSS PARTIAL RETURNS @ 1350', REGAIN MOST RETURNS WHILE CIRCULATING. CLEANING HOLE W/ POLY SWEEPS. |
| | 18:00 - 0:00 | 6.00 | DRLSUR | 02 | D | P | | DRILL W/ MWD 1411'-1810' (399',67'/HR) WOB 8-12K, RPM 50, MOT RPM 88, GPM 550, ON/OFF PSI 950/700'. UP/DOWN/ROT52/45/49. CIRC W/ 80 OR 90% OF RETURNS. CLEAN HOLE W/ POLY SWEEPS. NO AIR. |
| 4/13/2010 | 0:00 - 2:00 | 2.00 | DRLSUR | 02 | D | P | | DRILL W/ MWD 1810'- 1941' (131, 66'/HR) TD 4/13/2010 02:00. WOB 8-13K, RPM 50, MOT RPM 88, GPM 550, ON/OFF PSI 1000/750'. UP/DOWN/ROT55/48/52 CIRC W/ 80 OR 90% OF RETURNS. CLEAN HOLE W/ POLY SWEEPS. NO AIR |
| | 2:00 - 3:30 | 1.50 | CSG | 05 | F | P | | CIRC AND CONDITION HOLE. CLEAN HOLE W/ POLY SWEEPS. NO AIR. |
| | 3:30 - 6:00 | 2.50 | CSG | 06 | D | P | | LDDS, LD DIRECTIONAL TOOLS, BREAK BIT AND LD MOTOR. PREPARE TO RUN CSG. |
| | 6:00 - 9:00 | 3.00 | CSG | 12 | C | P | | HOLD SAFETY MEETING, RUN 43 JTS OF 8-5/8" IJ-55 28# CSG W/ 8RD LTC THREADS AND LAND FLOAT SHOE @ 1914' KB . BAFFLE PLATE RAN IN TOP OF SHOE JT LANDED @ 1869' KB. FILL CSG 100, AND 1000'. |
| | 9:00 - 12:00 | 3.00 | CSG | 12 | E | P | | HOLD SAFETY MEETING W/ SUPERIOR WELL SERVICES CEMENTERS. INSTALL CEMENT HEAD ON TOP OF LANDING JT. PRESSURE TEST LINE TO 2000 PSI. PUMP 110 BBLS OF WATER AHEAD, PUMP 20 BBLS OF GEL WATER. PUMP 100 SX OF 11#, 3.52 YD, 23 GAL/SK HI FILL LEAD, PUMP 225 SX OF 15.8# 1.15 YD, 5 GAL/SK TAIL PREM. CLASS G CEMENT . DROP PLUG ON FLY, DISPLACE W/ 116.5 BBLS OF WATER. 250 PSI OF LIFT @ 2 BBLS/MIN RATE. 1 BBLS OF LEAD TO SURFACE. BUMP PLUG W/ 800 PSI. FLOAT HELD. CEMENT FELL. PUMP 100 SX OF 15.8# PREMIUM 3% CALC CEMENT DOWN BACK SIDE. NO CEMENT TO SURFACE. WAIT TILL NEXT JOB TO TOP OUT. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ENSIGN 146/146, CAPSTAR 310/310 |
| Event: DRILLING | Start Date: 4/8/2010 | End Date: 5/25/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Leve | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 12:00 - 13:30 | 1.50 | RDMO | 14 | A | P | | CUT OFF AND HANG RISER AND AND ROT HEAD. INSTALL HANG OFF BAR. LAND CSG AND BREAK OFF LANDING JT. CUT OFF CSG COLLAR AND TACK CAP ON TOP OF CSG. BREAK DOWN BOWIE LINE. RELEASE RIG 4/13/2010 13:30. |
| 5/19/2010 | 19:00 - 20:00 | 1.00 | MIRU | 01 | C | P | | SKID RIG OVER WELL |
| | 20:00 - 21:30 | 1.50 | MAINT | 08 | A | P | | CHANGED OUT RAM ON GRABBER BOX |
| | 21:30 - 23:30 | 2.00 | MAINT | 09 | A | P | | CUT & SLIP DRILLINE |
| | 23:30 - 0:00 | 0.50 | MIRU | 14 | A | P | | NIPPLE UP BOP |
| 5/20/2010 | 0:00 - 1:00 | 1.00 | MIRU | 14 | A | P | | NIPPLE UP BOP |
| | 1:00 - 5:00 | 4.00 | MIRU | 15 | A | P | | TEST BOP RAMS, CHOKE, HCR, KILLINE, TO 250 LOW, 5000 HIGH, ANNULAR 250 LOW, 2500 HIGH, CASING 1500 |
| | 5:00 - 5:30 | 0.50 | MIRU | 06 | J | P | | INSTALL WEAR BUSHING |
| | 5:30 - 7:30 | 2.00 | DRLPRO | 08 | A | Z | | IRON DERRICKHAND WOULD NOT MOVE, QUICK COUPLER IN HYDROLIC ROOM BAD |
| | 7:30 - 10:30 | 3.00 | DRLPRO | 06 | A | P | | L/D OLD MOTOR, KICK PAD IS GONE & STARTING TO CUT INTO BODY OF MOTOR, P/U NEW MOTOR SCRIBE DIRECTIONAL TOOLS, R.I.H TAG CMT. @ 1816 FT. |
| | 10:30 - 11:00 | 0.50 | DRLPRO | 07 | B | P | | LEVEL DERRICK & INSTALL ROTATING HEAD |
| | 11:00 - 13:30 | 2.50 | DRLPRO | 02 | F | P | | DRILL CMT, FLOAT, & SHOE |
| | 13:30 - 0:00 | 10.50 | DRLPRO | 02 | D | P | | DRILL & SLIDE F/ 1946 TO 2956 - 1010 FT. 96 FT. PER/HR, MW 8.4, VIS 26, WOB 20,RPM 40,MMRPM 141, GPM 515, PSI ON BTM 1400, OFF 1150 |
| 5/21/2010 | 0:00 - 8:00 | 8.00 | DRLPRO | 02 | D | P | | DRILL & SLIDE F/ 2956 TO 3913 - 957 FT. 119 FT. PER/HR. MW 8.5, VIS 27, WOB 20, RPM 40, MMRPM 141, GPM 515, PSI ON BTM 1750, OFF 1150 |
| | 8:00 - 8:30 | 0.50 | DRLPRO | 08 | A | Z | | POWER SHOE ON IRON DERRICKHAND WOULDN'T OPEN, HAD TO OPEN UP MANUALLY |
| | 8:30 - 12:00 | 3.50 | DRLPRO | 02 | D | P | | DRILL & SLIDE F/ 3913 TO 4275 - 362 FT. 103 FT. PER/HR. MW 8.5, VIS 27, WOB 20, RPM 40, MMRPM 141, GPM 515, PSI ON BTM 1800, OFF 1200 |
| | 12:00 - 12:30 | 0.50 | DRLPRO | 08 | A | Z | | POWER SHOE ON IRON DERRICKHAND HAD TO BE READJUSTED |
| | 12:30 - 0:00 | 11.50 | DRLPRO | 02 | D | P | | DRILL & SLIDE F/ 4275 TO 5810 - 1535 FT. 133 FT. PER/HR. MW 10.6, VIS 34, WOB 20, RPM 40, MMRPM 141, GPM 515, PSI ON BTM 2050, OFF 1650 |
| 5/22/2010 | 0:00 - 0:00 | 24.00 | DRLPRO | 02 | D | P | | DRILL & SLIDE F/ 5810 TO 7358 - 1548 FT. 64.5 FT. PER/HR. MW 10.9, VIS 41, WOB 20, RPM 40, MMRPM 131, GPM 467, PSI ON BTM 2150 OFF 185( |
| 5/23/2010 | 0:00 - 15:00 | 15.00 | DRLPRO | 02 | D | P | | DRILL F/ 7358 TO 8355 - 997 FT. 66 FT. PER/HR. MW 11.4, VIS 47, WOB 20, RPM 40, MMRPM 131, GPM 467, PSI ON BTM. 2450 OFF 2000 |
| | 15:00 - 15:30 | 0.50 | DRLPRO | 07 | A | P | | RIG SERVICE |
| | 15:30 - 22:00 | 6.50 | DRLPRO | 02 | D | P | | DRILL F/ 8355 TO 8800 TD - 445 FT. 68 FT. PER/HR, MW 11.5, VIS 42, WOB 20, RPM 40, MMRPM 131, GPM 467, PSI ON BTM 2450, OFF 2000 |
| | 22:00 - 23:30 | 1.50 | DRLPRO | 05 | C | P | | CIRC. 2 BTMS UP FOR WIPER TRIP |
| | 23:30 - 0:00 | 0.50 | DRLPRO | 06 | E | P | | START WIPER TRIP PUMPING OUT STDS. |
| 5/24/2010 | 0:00 - 8:00 | 8.00 | DRLPRO | 06 | E | P | | FINISH TRIPPING OUT FOR WIPER TRIP - PUMPED OUT 45 STDS. |
| | 8:00 - 12:00 | 4.00 | DRLPRO | 06 | E | P | | TRIP IN THE HOLE |
| | 12:00 - 13:00 | 1.00 | DRLPRO | 03 | E | P | | WASH & REAM 100 FT. TO BTM. |
| | 13:00 - 14:30 | 1.50 | DRLPRO | 05 | C | P | | CIRC. 2 BTMS. UP |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ENSIGN 146/146, CAPSTAR 310/310 |
| Event: DRILLING | Start Date: 4/8/2010 | End Date: 5/25/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Leve | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 14:30 - 16:00 | 1.50 | DRLPRO | 06 | B | P | | T.O.H FOR LOGS - PUMPED OUT 15 STDS. |
| | 16:00 - 17:00 | 1.00 | DRLPRO | 08 | A | Z | | MANUALLY OPEN UP POWER SHOE ON IRON DERRICKHAND |
| | 17:00 - 23:30 | 6.50 | DRLPRO | 06 | B | P | | T.O.H FOR LOGS |
| | 23:30 - 0:00 | 0.50 | DRLPRO | 06 | J | P | | RETRIEVE WEAR BUSHING |
| 5/25/2010 | 0:00 - 5:30 | 5.50 | DRLPRO | 11 | D | P | | RIG UP & RUN OPEN HOLE LOGS, FOUGHT THROUGH BRIDGES @ 4500 - 5000 FT. - LOGGERS TD 8798 FT. |
| | 5:30 - 13:30 | 8.00 | DRLPRO | 12 | C | P | | HELD SAFETY MEETING & RIG UP FRANKS CASING CREW, RAN 212 JTS. 4 1/2 11.6#, I-80 BTC CASING, SHOE SET @ 8789 FT. FLOAT COLLAR @ 8748.58, LANDED W/ 85K, WASH THROUGH BRIDGE @ 8116 FT. |
| | 13:30 - 14:30 | 1.00 | DRLPRO | 05 | D | P | | CIRC. BTMS. UP, HAD SOME GAS @ BTMS. UP GAINED 10 BBLS. |
| | 14:30 - 17:00 | 2.50 | DRLPRO | 12 | E | P | | HELD SAFETY MEETING W/ BJ SERVICES, RIGGED UP & PUMP 40 BBL. SPACER, LEAD W/ 585 SXS 260 BBLS. 11.7# 2.5 YIELD, TAIL W/ 617 SXS 143 BBLS. 14.3# 1.31 YIELD, DISPLACED W/ 136 BBLS WATER, BUMPED PLUG, FLOATS HELD, 1.5 BBLS. BACK TO TRUCK, 15 BBLS CMT. TO PIT, FINAL LIFT PSI 1950 PSI. EST. TOP TAIL 5240 FT. |
| | 17:00 - 19:00 | 2.00 | DRLPRO | 14 | A | P | | FLUSH STACK, NIPPLE DOWN BOP, CLEAN MUD TANKS, RELEASE RIG @ 19:00 5/25/2010 |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ENSIGN 146/146, CAPSTAR 310/310 |
| Event: DRILLING | Start Date: 4/8/2010 | End Date: 5/25/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Leve | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 19:00 - 19:00 | 0.00 | DRLPRO | | | | | CONDUCTOR CASING:<br>Cond. Depth set: 44<br>Cement sx used:<br><br>SPUD DATE/TIME: 4/12/2010 3:30<br><br>SURFACE HOLE:<br>Surface From depth:44<br>Surface To depth: 1,941<br>Total SURFACE hours: 20.00<br>Surface Casing size:8 5/8<br># of casing joints ran: 43<br>Casing set MD:1,914.0<br># sx of cement:425<br>Cement blend (ppg:)L 11 T 15.8<br>Cement yield (ft3/sk): L 3.52 T 1.15<br># of bbls to surface: 0<br>Describe cement issues: TOPPED OUT W/ 100 SXS<br>Describe hole issues:<br><br>PRODUCTION:<br>Rig Move/Skid start date/time: 5/19/2010 19:00<br>Rig Move/Skid finish date/time5/19/2010 20:00<br>Total MOVE hours: 1.0<br>Prod Rig Spud date/time: 5/20/2010 11:00<br>Rig Release date/time: 5/25/2010 19:00<br>Total SPUD to RR hours: 128.0<br>Planned depth MD 8,785<br>Planned depth TVD 8,475<br>Actual MD: 8,800<br>Actual TVD: 8,495<br>Open Wells $: $556,558<br>AFE $: $670,141<br>Open wells $/ft:$63.25<br><br>PRODUCTION HOLE:<br>Prod. From depth: 1,946<br>Prod. To depth:8,800<br>Total PROD hours: 79<br>Log Depth: 8798<br>Production Casing size: 4 1/2<br># of casing joints ran: 212<br>Casing set MD:8,789.0<br># sx of cement:L 585 T 617<br>Cement blend (ppg:)L 11.7 T 14.3<br>Cement yield (ft3/sk): L 2.5 T 1.31<br>Est. TOC (Lead & Tail) or 2 Stage : 5240<br>Describe cement issues: 15 BBLS. TO PIT<br>Describe hole issues: HIT BRIDGE WHILE RUNNING CASING @ 8116<br><br>DIRECTIONAL INFO:<br>KOP: 2,000<br>Max angle: 28.75<br>Departure: 1524.25<br>Max dogleg MD: 4.46 |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 7/8/2010 | 7:00 - 10:00 | 3.00 | COMP | 30 | | P | | ROAD RIG & MOVE EQUIPMENT FROM NBU 920-14M PAD TO LOC |
| | 10:00 - 10:15 | 0.25 | COMP | 48 | | P | | JSA= TRAFFIC ON LOCATION |
| | 10:15 - 18:00 | 7.75 | COMP | 30 | | P | | SPOT RIG & EQUIP, RU RIG ND WELL HEAD NU BOPS, TALLEY & PU TUBING TAG @ 8728' C/O & DRILL TO FLOAT COLLAR @ 8744' C/O @ DRILL TO 8764' CIRC CLEAN F/ 40 MINUTES RD PWR SWVL POOH 10 JNTS EOT @ 8470' SDFN |
| 7/9/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | JSA= TRAFFIC ON LOCATION |
| | 7:15 - 12:00 | 4.75 | COMP | 30 | | P | | 0 PSI ON WELL, POOH LD TUBING LD BHA, FILL HOLE W/ TMAC RIG DOWN RIG & PUMP MOVE OFF. TO BONANZA 1023-4A, R/O B &C QUICK TEST PRESSURE TEST CSG & FRAC VALVE TO 7000#, |
| | 12:00 - 15:00 | 3.00 | COMP | 37 | B | P | | ( STG #1 ) R/U CUTTER WIRELINE RIH W/ PERF GUNS, PERF THE MESAVERDE @ 8704' - 8706' 3-SPF, 8720' - 8724' 3-SPF, 8742' - 8746' 3-SPF, 8763' - 8766' 4-SPF, USING 3 3/8" SCALLOP GUNS, 90* PHS 0.36 HOLES 23 gm, 42 HOLES, |
| 7/12/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | HSM. |

US ROCKIES REGION

# Operation Summary Report

| | | | |
|---|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 8:10 - | | COMP | 36 | E | P | | FRAC STG #1 MESAVERDE 8704'-8766' [42 HOLES]<br><br>STG #1] WHP=1000#, BEK DN PERFS=3558#, INJ RT=49.5, INJ PSI=4850#, ISIP=2328#, FG=.70, PUMP'D 1863 BBLS SLK WTR W/ 69168# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2530#, FG=.72, AR=47, AP=4875#, MR=50, MP=6007#, NPI=202#, 31/40 CALC PERFS OPEN. 31/42 CALC PERFS OPEN.<br><br>STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8594' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>8561'-8564' 4 SPF, 90* PH, 12 HOLES.<br>8548'-8550' 4 SPF, 90* PH, 8 HOLES.<br>8525'-8528' 3 SPF, 120* PH, 9 HOLES.<br>8492'-8494' 3 SPF, 120* PH, 6 HOLES.<br>8434'-8436' 3 SPF, 120* PH, 6 HOLES [42 HOLES]<br><br>[MISSFIRE ON STG #2 SET PLUG, SHOT BOTTOM 2 GUNS WENT SHORT POOH TO FIX PROBLEM.]<br><br>STG #2] WHP=2050#, BEK DN PERFS=2508#, INJ RT=44.5, INJ PSI=4646#, ISIP=2252#, FG=.70, PUMP'D 924 BBLS SLK WTR W/ 33718# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2375#, FG=.71, AR=47, AP=4780#, MR=51, MP=5793#, NPI=123#, 30/40 CALC PERFS OPEN.<br><br>STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8370' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>8334'-8340' 4 SPF, 90* PH, 24 HOLES.<br>8306'-8310' 4 SPF, 90* PH, 16 HOLES [40 HOLES]<br><br>STG #3] WHP=2155#, BEK DN PERFS=2708#, INJ RT=49.8, INJ PSI=5254#, ISIP=2427#, FG=.73, PUMP'D 1038 BBLS SLK WTR W/ 39076# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2661#, FG=.75, AR=50.2, AP=5284#, MR=51.2, MP=5836#, NPI=234#, 29/40 CALC PERFS OPEN.<br><br>STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8140' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. |
| 7/13/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | HSM, WORKING W/ CHEMICALS |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 7:15 - | | COMP | 36 | E | P | | FRAC STG #4 MESAVERDE 8072'-8110' [40 HOLES]<br><br>STG #4] WHP=1914#, BEK DN PERFS=3720#, INJ RT=47, INJ PSI=5254#, ISIP=2746#, FG=., PUMP'D 1050 BBLS SLK WTR W/ 28155# 30/50 MESH W/ NO RESIN COAT IN TAIL, ISIP=#, FG=., AR=, AP=#, MR=, MP=#, NPI=#, 30/40 CALC PERFS OPEN.<br><br>[SCREENED STG #4 OFF W/ 28155# SAND & NO RESIN COAT IN TAIL FLOWED WELL FOR 15 MIN, PUMP'D 90 BBLS LOCKED UP, FLOWED WELL BACK FOR 30 MIN TRIED TO REFLUSH W/ NO SUCCESS, FLOWED WELL FOR 4 HRS STILL COULD NOT FLUSH, PERF'D STG #5 W/ OUT SETTING PLUG]<br><br>STG #5] DID NOT RUN PLUG, PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>7914'-7918' 4 SPF, 90* PH, 16 HOLES.<br>7902'-7904' 4 SPF, 90* PH, 8 HOLES.<br>7840'-7842' 4 SPF, 90* PH, 8 HOLES.<br>7818'-7822' 3 SPF, 120* PH, 12 HOLES [44 HOLES]<br><br>STG #5] WHP=1570#, BEK DN PERFS=4211#, INJ RT=47, INJ PSI=5983#, ISIP=2138#, FG=.71, PUMP'D 1249 BBLS SLK WTR W/ 50614# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=1796#, FG=.66, AR=50, AP=4724#, MR=51.6, MP=5135#, NPI=-342#, 44/44 CALC PERFS OPEN. SWIFN. |
| 7/14/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | HSM. |

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 7:15 - 18:00 | 10.75 | COMP | 36 | E | P | | STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 7740' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>7706'-7710' 4 SPF, 90* PH, 16 HOLES.<br>7667'-7669' 4 SPF, 90* PH, 8 HOLES.<br>7604'-7606' 4 SPF, 90* PH, 8 HOLES.<br>7530'-7532' 3 SPF, 120* PH, 6 HOLES.<br>7506'-7508' 3 SPF, 120* PH, 6 HOLES [44 HOLES]<br><br>STG #6] WHP=1317#, BEK DN PERFS=2679#, INJ RT=50.2, INJ PSI=4874#, ISIP=1471#, FG=.63, PUMP'D 1615 BBLS SLK WTR W/ 65819# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=1849#, FG=.68, AR=50, AP=4193#, MR=50.7, MP=4533#, NPI=565#, 33/40 CALC PERFS OPEN.<br><br>STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 7394' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>7360'-7364' 4 SPF, 90* PH 16 HOLES.<br>7324'-7326' 4 SPF, 90* PH, 8 HOLES.<br>7276'-7280' 3 SPF, 120* PH, 12 HOLES.<br>7232'-7234' 3 SPF, 120* PH, 6 HOLES [42 HOLES]<br><br>STG #7] WHP=570#, BEK DN PERFS=2985#, INJ RT=50.2, INJ PSI=4356#, ISIP=1488#, FG=.64, PUMP'D 1621 BBLS SLK WTR W/ 68754# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2053#, FG=.72, AR=50.2, AP=3774#, MR=52.1, MP=4533#, NPI=565#, 30/40 CALC PERFS OPEN.<br><br>STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 6768' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE.<br>6782'-6788' 4 SPF, 90* PH, 24 HOLES.<br>6684'-6688' 4 SPF, 90* PH, 16 HOLES [40 HOLES]<br><br>STG #8] WHP=500#, BEK DN PERFS=2611#, INJ RT=50, INJ PSI=4931#, ISIP=2062#, FG=.74, PUMP'D 681 BBLS SLK WTR W/ 23701# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2280#, FG=.77, AR=50, AP=4734#, MR=50.4, MP=5074#, NPI=218#, 28/40 CALC PERFS OPEN.<br><br>P/U RIH W/ HALIBURTON 8K CBP. SET CBP @ 6634' FOR TOP KILL. SWI. PREP TO DRILL OUT |
| 7/20/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | JSA MOVE EQUIPMENT |

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 7:15 - 17:00 | 9.75 | COMP | 30 | | P | | RU RIG SPOT EQUIP ND FRAC VALVES NU BOPS TALLEY & PU PIPE TAG TOP PLUG @ 6634' RU PWR SWVL EST CIRC PRESS TEST 3000#<br><br>PLUG #1] DRILL THRU HALLI 8K CBP @ 6634' IN 6 MIN W/ 50# INCREASE<br><br>PLUG #2] CONTINUE TO RIH TAG SAND @ 6788' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 6818' IN 20 MIN W/ 200# INCREASE<br><br>PLUG #3] CONTINUE TO RIH TAG SAND @ 7364' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7394' IN 11 MIN W/ 100# INCREASE<br><br>PLUG #4] CONTINUE TO RIH TAG SAND @ 7710' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7740' IN 9 MIN W/ 200# INCREASE (350# ON WELL)<br><br>PLUG #5] CONTINUE TO RIH TAG SAND @ C/O SAND TO CBP @ 8140' CIRC CLEAN POOH ABOVE PERFS SWIFN CONTINUE DRILLING IN AM EOT @ 6642' |
| 7/21/2010 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | JSA= HOT WEATHER |
| | 7:15 - 15:00 | 7.75 | COMP | 30 | | P | | SIWP= 1900# OPEN WELL TO PIT RIH TAG @8345'<br><br>PLUG #6] TAG SAND @ 8110' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8140' IN 9 MIN W/ 100# INCREASE (450# ON WELL)<br><br>PLUG #7] CONTINUE TO RIH TAG SAND @ 8349' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8370' IN 7 MIN W/ 150# INCREASE<br><br>PLUG #8] CONTINUE TO RIH TAG SAND @ 8569' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8594' IN 13 MIN W/ 150# INCREASE (700# ON WELL)<br><br>CONTINUE TO RIH TAG SAND @ 8750' C/O TO 8765' CIRC CLEAN POOH LD 11 JNTS LAND TUBING ON HANGER W/ 267 JNS OF 2-3/8" L-80 TUBING EOT @ 8416.63' RD FLOOR & TUBING EQUIP ND BOPS NU WELL HEAD DROP BALL PUMP OFF BIT @2600 # SWI 30 MIN TURN WELL OVER TO FBC W/ TOTAL PUMPED= 10065 BBLS, RIG REC= 2100BBLS, LEFT TO REC= 7965 BBLS, RIG DOWN MOVE TO BLUE WELL |
| 7/22/2010 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 2650#, TP 1950#, 20/64" CK, 49 BWPH, TRACE SAND, LIGHT GAS<br>TTL BBLS RECOVERED: 3291<br>BBLS LEFT TO RECOVER: 6774 |
| | 9:00 - | | PROD | 50 | | | | WELL TURNED TO SALES @ 0900 HR ON 7/22/2010 - 1300 MCFD, 1176 BWPD, CP 2950#, FTP 1950#, CK 20/64" |
| 7/23/2010 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 3100#, TP 2025#, 20/64" CK, 37 BWPH, TRACE SAND, 2031 GAS<br>TTL BBLS RECOVERED: 4307<br>BBLS LEFT TO RECOVER: 5758 |
| 7/24/2010 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 3025#, TP 2025#, 20/64" CK, 31 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 5109<br>BBLS LEFT TO RECOVER: 4956 |

US ROCKIES REGION

# Operation Summary Report

| | | | |
|---|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | | Rig Name No: SWABBCO 1/1 |
| Event: COMPLETION | Start Date: 7/9/2010 | | End Date: 7/21/2010 |
| Active Datum: RKB @5,158.01ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 7/25/2010 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 2900#, TP 1975#, 20/64" CK, 24 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 5777<br>BBLS LEFT TO RECOVER: 4288 |

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 4/4/2011 | ☐ ACIDIZE | ☐ ALTER CASING | ✓ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ✓ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

The operator requests approval to conduct wellhead repair/re-completion operations on the subject well location. The operator proposes to re-complete the Wasatch formation. The operator also requests authorization to commingle the newly Wasatch and existing Mesaverde formations. Please refer to the attached wellhead repair/re-completion procedures.

**Accepted by the Utah Division of Oil, Gas and Mining**

**Date:** 04/05/2011

**By:** Dark K Quist

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Gina Becker | 720 929-6086 | Regulatory Analyst II |
| **SIGNATURE** N/A | | **DATE** 4/4/2011 |

RECEIVED Apr. 04, 2011

**The Utah Division of Oil, Gas, and Mining**

**- State of Utah**
**- Department of Natural Resources**

**Electronic Permitting System - Sundry Notices**

## Sundry Conditions of Approval Well Number 43047504540000

## Authorization: Board Cause No. 179-14.

**RECEIVED** Apr. 04, 2011

# Greater Natural Buttes Unit

## BONANZA 1023-6N1CS

### WELLHEAD CHANGEOUT & RE-COMPLETIONS PROCEDURE

**DATE:1/18/2011**
**AFE#:**
**WO#:** **(**For Wellhead Changeout**)**
**USER ID:JVN975** (Frac Invoices Only)

**COMPLETIONS ENGINEER:** **Michael Sollee, Denver, CO**
**(720)-929-6057 (Office)**
**(832)-859-0515 (Cell)**

**SIGNATURE:**

**ENGINEERING MANAGER: JEFF DUFRESNE**

**SIGNATURE:**

R E M E M B E R S A F E T Y F I R S T !

**RECEIVED** Apr. 04, 2011

**Name:** **Bonanza 1023-6N1CS**
**Location:** **NWSW Sec. 6 10S 23E**
**Uintah County, UT**
**Date:** **1/18/11**

**ELEVATIONS:** 5144' GL 5159' KB

**TOTAL DEPTH:** 8800' **PBTD:** 8750'
**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 1920'
**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 BT&C @ 8789'
Marker Joint **6255-6276**'

**TUBULAR PROPERTIES:**

| | BURST (psi) | COLLAPSE (psi) | DRIFT DIA. (in.) | CAPACITIES (bbl/ft) | CAPACITIES (gal/ft) |
|---|---|---|---|---|---|
| 2 3/8" 4.7# J-55 tbg | 7,700 | 8,100 | 1.901" | 0.00387 | 0.1624 |
| 4 ½" 11.6# I-80 (See above) | 7780 | 6350 | 3.875" | 0.0155 | 0.6528 |
| 2 3/8" by 4 ½" Annulus | | | | 0.0101 | 0.4227 |

**TOPS:** **BOTTOMS:**

1116' Green River Top
1377' Bird's Nest Top
1738' Mahogany Top
4313' Wasatch Top — 6542' Wasatch Bottom
6542' Mesaverde Top — 8800' Mesaverde Bottom (TD)

**T.O.C. @** 2000'

**Relevant History:**

- Jul 2010 – Initial Completion – 8 slickwater stages in MVD; C/O to PBTD @ 8765'. Land tubing @ 8417'
- Sep 2010 – Slickline ran. Max TD @ 8416'. Could not get any deeper. Found scale.
- Oct 2010 – Slickline ran. Max TD @ 7389'. Could not get any deeper. Heavy trash on tubing.
- Dec 2010 – Workover plugged SN. LD 4 Scaled jts tbg. EOT 8430'
- Jan 2011 – Slickline ran. Stacked out at 8728. (60 ft above PBTD). Drop Spring.

RECEIVED Apr. 04, 2011

**Existing Perforations:**

| STAGE | ZONE | MD TOP (ft) | MD Base (ft) | SPF | Total Shots |
|---|---|---|---|---|---|
| | MESAVERDE | 6684 | 6688 | 4 | 16 |
| 8 | MESAVERDE | 6782 | 6788 | 4 | 24 |
| | MESAVERDE | 7232 | 7234 | 3 | 6 |
| | MESAVERDE | 7276 | 7280 | 3 | 12 |
| | MESAVERDE | 7324 | 7326 | 4 | 8 |
| 7 | MESAVERDE | 7360 | 7364 | 4 | 16 |
| | MESAVERDE | 7506 | 7508 | 3 | 6 |
| | MESAVERDE | 7530 | 7532 | 3 | 6 |
| | MESAVERDE | 7604 | 7606 | 4 | 8 |
| | MESAVERDE | 7667 | 7669 | 4 | 8 |
| 6 | MESAVERDE | 7706 | 7710 | 4 | 16 |
| | MESAVERDE | 7818 | 7822 | 3 | 12 |
| | MESAVERDE | 7840 | 7842 | 4 | 8 |
| | MESAVERDE | 7902 | 7904 | 4 | 8 |
| 5 | MESAVERDE | 7914 | 7918 | 4 | 16 |
| | MESAVERDE | 8072 | 8076 | 4 | 16 |
| 4 | MESAVERDE | 8104 | 8110 | 4 | 24 |
| | MESAVERDE | 8306 | 8310 | 4 | 16 |
| 3 | MESAVERDE | 8334 | 8340 | 4 | 24 |
| EOT @ 8430' | | | | | |
| | MESAVERDE | 8434 | 8436 | 3 | 6 |
| | MESAVERDE | 8492 | 8494 | 3 | 6 |
| | MESAVERDE | 8525 | 8528 | 3 | 9 |
| | MESAVERDE | 8548 | 8550 | 4 | 8 |
| 2 | MESAVERDE | 8561 | 8564 | 4 | 12 |
| | MESAVERDE | 8704 | 8706 | 3 | 6 |
| | MESAVERDE | 8720 | 8724 | 3 | 12 |
| | MESAVERDE | 8742 | 8746 | 3 | 12 |
| 1 | MESAVERDE | 8763 | 8766 | 4 | 12 |

RECEIVED Apr. 04, 2011

**Bonanza 1023-6N1CS– WELLHEAD REPLACEMENT PROCEDURE**

PREP-WORK PRIOR TO MIRU:

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
3. Open casing valve and record pressures.
4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
5. Open the relief valve and blow well down to the atmosphere.
6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure ).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. Pooh w/ tubing.
5. Rig up wireline service. RIH and set CBP @ ~**6634**'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service.
6. Remove BOP and ND WH.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.

RECEIVED Apr. 04, 2011

2. POOH, LD cutters and casing.

3. PU 1 joint of 3 ½" IF drill pipe with 4 ½" right hand standard grapple overshot. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to +/- 7,000 ft-lbs count number of turns to make-up, and document in the daily report. Release overshot, POOH, and lay down.

4. (Following an overshot run, the casing will have to be cut below the place where the overshot was engaged on the outside of the 4-1/2" casing and that piece of casing retrieved. The overshot will scar the outside of the casing, making the casing patch integrity questionable.)

4. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" P-110 casing.

5. Latch fish, PU to 100,000# tension. (Do not exceed a tensile pull of 100,000 lbs during pressure test.) RU B&C. Cycle pressure test to 6200 #.

6. Install C-22 slips. Land casing w/ 80,000# tension.

7. Cut-off and dress 4 ½" casing stub.

8. NUWH. PU 3 7/8" bit and RIH. Clean out to **~6568'.**

9. POOH

10. NU Frac Valves, Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes. Test 4-1/2 x 8-5/8" annulus to 200 psi for 15 minutes and check for communication to the production casing. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 8-5/8" annulus with pressure relief valve in line. Pressure relief will be set to release at 500 psig. Lock OPEN the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

11. RDMO. Turn well over to completions.

## BACK-OFF PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.

2. POOH, LD cutters and casing.

3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.

4. (Following an overshot run, the casing will have to be cut below the place where the overshot was engaged on the outside of the 4-1/2" casing and that piece of

casing retrieved. The overshot will scar the outside of the casing, making the casing patch integrity questionable.)

5. MIRU wireline services. RIH and shoot string shot at casing collar @ **54' (1st casing collar below mandrel)**.

6. MIRU casing crew.

7. Back-off casing, POOH.

8. PU new casing joint w/ entry guide and RIH. Tag casing top. Thread into casing and torque up to +/- 7000 ft-lbs, count number of additional turns to make-up, and document in the daily report.

9. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 6200 #

10. Install C-22 slips. Land casing w/ 80,000# tension.

11. Cut-off and dress 4 ½" casing stub.

12. NUWH. PU 3 7/8" bit and RIH. Clean out to **~6568'.**

13. POOH

14. NU Frac Valves, Test frac valves and casing to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes. Test 4-1/2 x 8-5/8" annulus to 200 psi for 15 minutes and check for communication to the production casing. As per standard operating procedure install steel blowdown line to reserve pit from 4-1/2" X 8-5/8" annulus with pressure relief valve in line. Pressure relief will be set to release at 500 psig. Lock OPEN the Braden head valve. Annulus will be monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

15. RDMO. Turn well over to completions.

RECEIVED Apr. 04, 2011

**Frac Procedure-GENERAL:**

- A minimum of **6** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Bakers Induction-Density-Neutron log dated 5/24/2010
- **3** fracturing stages required for coverage.
- Procedure calls for **4** CBP's (**8000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 3 gpt (in pad and until 1.25 ppg ramp up is reached) and 10 gpt in all flushes except the final stage. Remember to pre-load the casing with scale inhibitor for the very first stage with 10 gpt.
- 30/50 mesh Ottawa sand, **Slickwater frac**.
- Maximum surface pressure **6200** psi.
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- **Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.**
- **If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)**
- Service companies need to provide surface/production annulus pop-offs to be set for 500 psi for each frac.
- Pump 20/40mesh **resin coated sand** last 5,000# of all frac stages
- Tubing Currently Landed @~8430
- Originally completed on 7/12/2010

**PROCEDURE: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)**

1. MIRU.

2. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

| Zone | From | To | spf | # of shots |
|---|---|---|---|---|
| WASATCH | 6288 | 6289 | 3 | 3 |
| WASATCH | 6327 | 6328 | 3 | 3 |
| WASATCH | 6373 | 6375 | 3 | 6 |
| WASATCH | 6497 | 6498 | 3 | 3 |
| WASATCH | 6536 | 6538 | 3 | 6 |

3. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~6288' and trickle 250gal 15%HCL w/ scale inhibitor in flush .

RECEIVED Apr. 04, 2011

4. Set 8000 psi CBP at ~6,238'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

| Zone | From | To | spf | # of shots |
|---|---|---|---|---|
| WASATCH | 6014 | 6016 | 4 | 8 |
| WASATCH | 6048 | 6050 | 4 | 8 |
| WASATCH | 6186 | 6188 | 4 | 8 |

5. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~6014' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

6. Set 8000 psi CBP at ~5,725'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

| Zone | From | To | spf | # of shots |
|---|---|---|---|---|
| WASATCH | 5498 | 5500 | 4 | 8 |
| WASATCH | 5622 | 5625 | 4 | 12 |

7. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~5498' flush only with recycled water.

8. Set 8000 psi CBP at~5,448'.

9. ND Frac Valves, NU and Test BOPs.

10. TIH with 3 7/8" bit, pump off sub, SN and tubing.

11. Drill plugs and clean out to PBTD. Shear off bit and land tubing at ±**8430**' unless indicated otherwise by the well's behavior. The well will be commingled at this time.

12. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.

13. **Leave surface casing valve open**. Monitor and report any flow from surface casing. RDMO

**For design questions, please call**
**Michael Sollee, Denver, CO**
**(720)-929-6057 (Office)**
**(832)-859-0515 (Cell)**

**For field implementation questions, please call**
**Jeff Samuels, Vernal, UT**
**435-781 7046 (Office)**

NOTES:
**If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work**

RECEIVED Apr. 04, 2011

Acid Pickling and H2S Procedures (If Required)

**PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
3. IF WELL HAS PRESSURE AFTER 2 HOURS – RETEST CASING AND TUBING FOR H2S.
4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

RECEIVED Apr. 04, 2011

Key Contact information

Completion Engineer

Michael Sollee: 832-859-0515, 720-929-6057

Production Engineer

Kyle Bohannon: 804-512-1985, 435-781-7068

Completion Supervisor Foreman

Jeff Samuels: 435-828-6515, 435-781-7046

Completion Manager

Jeff Dufresne: 720-929-6281, 303-241-8428

Vernal Main Office

435-789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

RECEIVED Apr. 04, 2011

**Name** Bonanza 1023-6N1CS
**Perforation and CBP Summary**

| Stage | Zones | Perforations Top, ft | Perforations Bottom, ft | SPF | Holes | | Fracture Coverage | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | WASATCH | | NO PERFS | | | | 6265 | to | 6281.5 |
| | WASATCH | 6288 | 6289 | 3 | 3 | | 6284 | to | 6295 |
| | WASATCH | 6327 | 6328 | 3 | 3 | | 6325.5 | to | 6330.5 |
| | WASATCH | 6373 | 6375 | 3 | 6 | | 6368 | to | 6384.5 |
| | WASATCH | 6497 | 6498 | 3 | 3 | | 6496 | to | 6499.5 |
| | WASATCH | 6536 | 6538 | 3 | 6 | | 6523.5 | to | 6541 |
| | WASATCH | | | | | | | | |
| | | | | | Look | | | | |
| | # of Perfs/stage | | | | 21 | | CBP DEPTH | 6,238 | |
| 2 | WASATCH | 6014 | 6016 | 4 | 8 | | 5995 | to | 6019.5 |
| | WASATCH | 6048 | 6050 | 4 | 8 | | 6043 | to | 6057.5 |
| | WASATCH | 6186 | 6188 | 4 | 8 | | 6185 | to | 6188 |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | | | | | Look | | | | |
| | # of Perfs/stage | | | | 24 | | CBP DEPTH | 5,725 | |
| 3 | WASATCH | 5498 | 5500 | 4 | 8 | | 5494 | to | 5504.5 |
| | WASATCH | 5622 | 5625 | 4 | 12 | | 5606.5 | to | 5638.5 |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | WASATCH | | | | | | | | |
| | | | | | Look | | | | |
| | # of Perfs/stage | | | | 20 | | CBP DEPTH | 5,448 | |
| | | | | | | | | | |
| | Totals | | | | 65 | | | | |

RECEIVED Apr. 04, 2011

**Fracturing Schedules**

**Name** Bonanza 1023-6N1C — Copy to new book

**Slickwater Frac**

| | |
|---|---|
| Recomplete? | Y |
| Pad? | Y |
| ACTS? | N |

| | | |
|---|---|---|
| Swabbing Days | 0 | Enter Number of swabbing days here for recompletes |
| Production Log | 0 | Enter 1 if running a Production Log |
| DFIT | 0 | Enter Number of DFITs |

| Stage | Zone | Perfs Top, ft. | Perfs Bot., ft | SPF | Holes | Rate BPM | Fluid Type | Initial ppg | Final ppg | Fluid | Volume gals | Cum Vol gals | Volume BBLs | Cum Vol BBLs | Fluid % of frac | Sand % of frac | Sand lbs | Cum. Sand lbs | Footage from CBP to Flush | Scale Inhib., gal. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WASATCH | NO PERFS | | | | Varied | Pump-in test | | | Slickwater | | 0 | 0 | 0 | | | | | | |
| | WASATCH | 6288 | 6289 | 3 | 3 | 0 | ISIP and 5 min ISIP | | | | | | | | | | | | | 40 |
| | WASATCH | 6327 | 6328 | 3 | 3 | 50 | Slickwater Pad | | | Slickwater | 7,539 | 7,539 | 180 | 180 | 25.0% | 0.0% | 0 | 0 | | 23 |
| | WASATCH | 6373 | 6375 | 3 | 6 | 50 | Slickwater Ramp | 0.25 | 1 | Slickwater | 15,078 | 22,618 | 359 | 539 | 50.0% | 45.5% | 9,424 | 9,424 | | 45 |
| | WASATCH | 6497 | 6498 | 3 | 3 | 50 | Slickwater Ramp | 1 | 2 | Slickwater | 7,539 | 30,157 | 180 | 718 | 25.0% | 54.5% | 11,309 | 20,733 | | 0 |
| | WASATCH | 6536 | 6538 | 3 | 6 | 50 | Flush (4-1/2) | | | Slickwater | 4,105 | 34,262 | 98 | 816 | | | | 20,733 | | 0 |
| | WASATCH | | | | | | ISDP and 5 min ISDP | | | Slickwater | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | 20,733 | | 0 |
| | WASATCH | | | | | | | | | | | 34,262 | 98 | 816 | | | | | | 40 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 149 |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | Sand laden Volume | | 30,157 | | | | | | | | |
| | | # of Perfs/stage | | | Look 21 | | | | | | | | Flush depth | | 6288 | gal/md-ft | CBP depth | 38,000 | 26,125 | lbs sand/md-ft 6,238 | 50 | |
| | | | | | | 16.3 | << Above pump time (min) | | | | | | | | | | | | | | | |
| 2 | WASATCH | 6014 | 6016 | 4 | 8 | Varied | Pump-in test | | | Slickwater | | 0 | 0 | 0 | | | | | | |
| | WASATCH | 6048 | 6050 | 4 | 8 | 0 | ISIP and 5 min ISIP | | | | | | | | | | | | | 16 |
| | WASATCH | 6186 | 6188 | 4 | 8 | 50 | Slickwater Pad | | | Slickwater | 5,357 | 5,357 | 128 | 128 | 25.0% | 0.0% | 0 | 0 | | 32 |
| | WASATCH | | | | | 50 | Slickwater Ramp | 0.25 | 1 | Slickwater | 10,714 | 16,070 | 255 | 383 | 50.0% | 45.5% | 6,696 | 6,696 | | 0 |
| | WASATCH | | | | | 50 | Slickwater Ramp | 1 | 2 | Slickwater | 5,357 | 21,427 | 128 | 510 | 25.0% | 54.5% | 8,035 | 14,731 | | 0 |
| | WASATCH | | | | | 50 | Flush (4-1/2) | | | Slickwater | 3,926 | 25,353 | 93 | 604 | | | | 14,731 | | 0 |
| | WASATCH | | | | | | ISDP and 5 min ISDP | | | Slickwater | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | 14,731 | | 0 |
| | WASATCH | | | | | | | | | | | 25,353 | 93 | 604 | | | | | | 37 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 85 |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | Sand laden Volume | | 21,427 | | | | | | | | |
| | | # of Perfs/stage | | | Look 24 | | | | | | | | Flush depth | | 6014 | gal/md-ft | CBP depth | 70,000 | 48,125 | lbs sand/md-ft 5,725 | 289 | |
| | | | | | | 12.1 | << Above pump time (min) | | | | | | | | | | | | | | | |
| 3 | WASATCH | 5498 | 5500 | 4 | 8 | Varied | Pump-in test | | | Slickwater | | 0 | 0 | 0 | | | | | | |
| | WASATCH | 5622 | 5625 | 4 | 12 | 0 | ISIP and 5 min ISIP | | | | | | | | | | | | | 26 |
| | WASATCH | | | | | 50 | Slickwater Pad | | | Slickwater | 8,678 | 8,678 | 207 | 207 | 25.0% | 0.0% | 0 | 0 | | 52 |
| | WASATCH | | | | | 50 | Slickwater Ramp | 0.25 | 1 | Slickwater | 17,357 | 26,035 | 413 | 620 | 50.0% | 45.5% | 10,848 | 10,848 | | 0 |
| | WASATCH | | | | | 50 | Slickwater Ramp | 1 | 2 | Slickwater | 8,678 | 34,713 | 207 | 827 | 25.0% | 54.5% | 13,017 | 23,865 | | 0 |
| | WASATCH | | | | | 50 | Flush (4-1/2) | | | Slickwater | 3,589 | 38,302 | 85 | 912 | | | | 23,865 | | 0 |
| | WASATCH | | | | | | ISDP and 5 min ISDP | | | Slickwater | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | 23,865 | | 0 |
| | WASATCH | | | | | | | | | | | 38,302 | 85 | 912 | | | | | | 0 |
| | WASATCH | | | | | | | | | | | | | | | | | | | 78 |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | | | | | | | | | | | |
| | WASATCH | | | | | | | | | Sand laden Volume | | 34,713 | | | | | | | | |
| | | # of Perfs/stage | | | Look 20 | | | | | | | | Flush depth | | 5498 | gal/md-ft | CBP depth | 38,000 | 26,125 | lbs sand/md-ft 5,448 | 50 | |
| | | | | | | 18.2 | << Above pump time (min) | | | | | | | | | | | | | | | |
| | Totals | | | | 65 | | | | | | Total Fluid | 97,917 gals<br>2,331 bbls | | 2,331 bbls | | | Total Sand | | 59,329 | | | |
| | | | | | | 0.8 | | | | | | | | 5.2 tanks | | | | | Total Scale Inhib. = | | | 312 |

| | | |
|---|---|---|
| Total Stages | 3 | stages |
| Last Stage Flush | 3689 | gals |

| | | | |
|---|---|---|---|
| Friction Reducer | 47 | gals @ | 0.5 GPT |
| Surfactant | 94 | gals @ | 1.0 GPT |
| Clay Stabilizer | 94 | gals @ | 1.0 GPT |
| 15% Hcl | 750 | gals @ | 250 gal/stg |
| Iron Control for acid | 4 | gals @ | 5.0 GPT of aci |
| Surfactant for acid | 1 | gals @ | 1.0 GPT of aci |
| Corrosion Inhibitor for acid | 2 | gals @ | 2.0 GPT of aci |

Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

| | | | |
|---|---|---|---|
| Scale Inhibitor | 312 | gals pumped per schedule above | |
| Biocide | 47 | gals @ | 0.5 GPT |

RECEIVED Apr. 04, 2011

| MD | TVD | INC |
|---|---|---|
| 0.00 | 0.00 | 0.00 |
| 236.00 | 236.00 | 0.44 |
| 332.00 | 332.00 | 0.31 |
| 459.00 | 458.99 | 0.13 |
| 650.00 | 649.99 | 0.31 |
| 841.00 | 840.99 | 0.44 |
| 1032.00 | 1031.98 | 0.44 |
| 1223.00 | 1222.98 | 0.25 |
| 1319.00 | 1318.98 | 0.19 |
| 1415.00 | 1414.98 | 0.38 |
| 1606.00 | 1605.97 | 1.00 |
| 1702.00 | 1701.96 | 0.44 |
| 1828.00 | 1827.96 | 0.13 |
| 1892.00 | 1891.96 | 0.13 |
| 1959.00 | 1958.95 | 0.56 |
| 2050.00 | 2049.94 | 2.13 |
| 2140.00 | 2139.73 | 5.44 |
| 2231.00 | 2230.01 | 8.81 |
| 2322.00 | 2319.48 | 12.19 |
| 2412.00 | 2407.18 | 13.75 |
| 2503.00 | 2495.34 | 15.00 |
| 2594.00 | 2582.71 | 17.50 |
| 2685.00 | 2668.47 | 21.50 |
| 2775.00 | 2751.44 | 24.06 |
| 2866.00 | 2834.38 | 24.57 |
| 2957.00 | 2916.79 | 25.63 |
| 3047.00 | 2998.16 | 24.94 |
| 3138.00 | 3080.49 | 25.50 |
| 3229.00 | 3162.92 | 24.63 |
| 3319.00 | 3244.65 | 24.88 |
| 3410.00 | 3326.95 | 25.63 |
| 3501.00 | 3409.45 | 24.31 |
| 3591.00 | 3491.79 | 23.31 |
| 3682.00 | 3575.36 | 23.31 |
| 3772.00 | 3657.91 | 23.65 |
| 3863.00 | 3741.29 | 23.56 |
| 3953.00 | 3822.75 | 26.75 |
| 4044.00 | 3903.63 | 27.81 |
| 4135.00 | 3984.64 | 26.38 |
| 4225.00 | 4065.61 | 25.38 |
| 4316.00 | 4147.57 | 26.13 |
| 4407.00 | 4228.35 | 28.69 |
| 4497.00 | 4307.28 | 28.75 |
| 4588.00 | 4387.36 | 27.94 |
| 4678.00 | 4467.31 | 26.75 |
| 4769.00 | 4548.55 | 26.81 |
| 4860.00 | 4630.35 | 25.13 |
| 4950.00 | 4711.37 | 26.50 |
| 5041.00 | 4793.18 | 25.44 |
| 5132.00 | 4875.84 | 24.00 |
| 5222.00 | 4958.45 | 22.75 |
| 5313.00 | 5042.79 | 21.38 |
| 5404.00 | 5128.00 | 19.69 |
| 5494.00 | 5213.17 | 18.00 |
| 5585.00 | 5299.64 | 18.31 |
| 5676.00 | 5386.34 | 17.06 |
| 5766.00 | 5472.74 | 15.44 |
| 5857.00 | 5560.74 | 14.06 |
| 5948.00 | 5649.18 | 13.19 |
| 6039.00 | 5738.13 | 11.19 |
| 6129.00 | 5826.66 | 9.50 |
| 6220.00 | 5916.62 | 7.81 |
| 6310.00 | 6006.04 | 5.13 |
| 6401.00 | 6096.82 | 2.75 |
| 6492.00 | 6187.69 | 3.25 |
| 6582.00 | 6277.63 | 0.81 |
| 6673.00 | 6368.63 | 0.50 |
| 6763.00 | 6458.60 | 2.50 |
| 6854.00 | 6549.53 | 2.06 |
| 6945.00 | 6640.48 | 1.75 |
| 7035.00 | 6730.45 | 1.38 |
| 7126.00 | 6821.42 | 1.63 |
| 7217.00 | 6912.40 | 0.75 |
| 7307.00 | 7002.39 | 0.94 |
| 7398.00 | 7093.37 | 1.30 |
| 7489.00 | 7184.35 | 1.19 |
| 7579.00 | 7274.33 | 1.06 |
| 7670.00 | 7365.32 | 0.94 |
| 7761.00 | 7456.31 | 0.63 |
| 7852.00 | 7547.31 | 0.13 |
| 7942.00 | 7637.31 | 0.31 |
| 8033.00 | 7728.31 | 0.19 |
| 8124.00 | 7819.31 | 0.06 |
| 8215.00 | 7910.31 | 0.63 |
| 8305.00 | 8000.30 | 0.81 |
| 8396.00 | 8091.29 | 0.63 |
| 8487.00 | 8182.29 | 0.63 |
| 8577.00 | 8272.28 | 0.63 |
| 8668.00 | 8363.26 | 1.56 |
| 8750.00 | 8445.23 | 1.64 |
| 8800.00 | 8495.21 | 1.64 |

RECEIVED Apr. 04, 2011

# Logan High Pressure Casing Patches
## Assembly Procedure

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type “L” Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.

2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type “L” Packers.

3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.

4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.

5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.

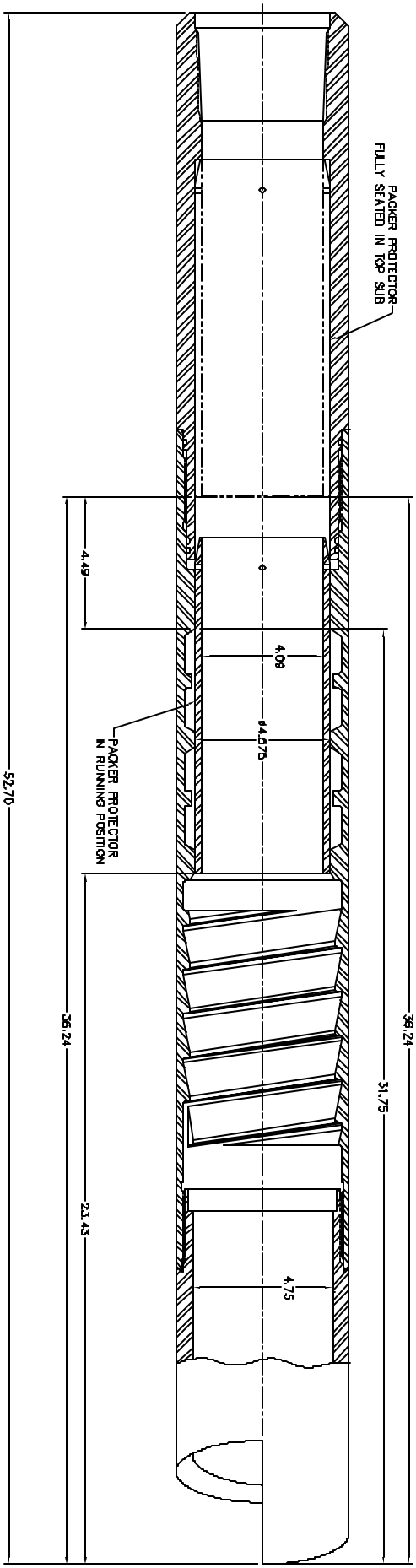
6. Install the Cutlipped Guide into the lower end of the Bowl.

7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.

8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.

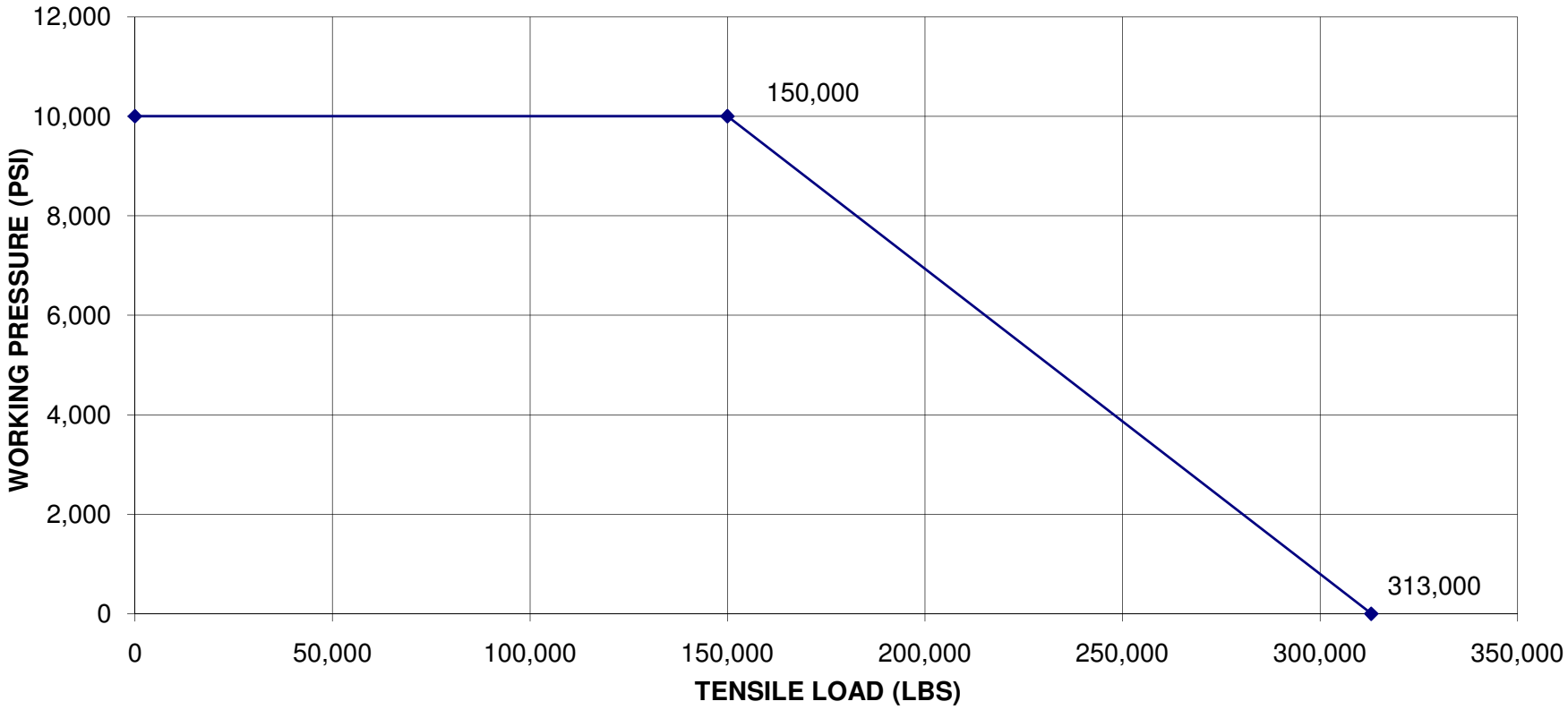
RECEIVED Apr. 04, 2011




510L-005-001 4-1/2" LOGAN HP CASING PATCH

RECEIVED Apr. 04, 2011

# STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH
# 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L
# LOGAN ASSEMBLY NO. 510L-005 -000




COLLAPSE PRESSURE:
11,222 PSI @ 0 TENSILE
8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield:
Tensile Strength w/ 0 Int. Press.= 472,791lbs.
Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

RECEIVED Apr. 04, 2011

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ✓ CASING REPAIR |
| ✓ SUBSEQUENT REPORT Date of Work Completion: 7/6/2011 | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ✓ OTHER | OTHER: Wellhead Repair |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

THE OPERATOR HAS CONCLUDED WELLHEAD/CASING REPAIRS ON THE SUBJECT WELL LOCATION. PLEASE SEE THE ATTACHED CHRONOLOGICAL HISTORY FOR DETAILS OF THE OPERATIONS.

**Accepted by the Utah Division of Oil, Gas and Mining**

**FOR RECORD ONLY**

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Gina Becker | 720 929-6086 | Regulatory Analyst II |
| **SIGNATURE** N/A | | **DATE** 7/6/2011 |

RECEIVED Jul. 06, 2011

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS YELLOW | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: SWABBCO 6/6 |
| Event: WELL WORK EXPENSE | Start Date: 6/21/2011 | End Date: 6/22/2011 |
| Active Datum: RKB @5,158.00ft (above Mean Sea Leve | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 6/21/2011 | 7:00 - 7:15 | 0.25 | WO/REP | 48 | | P | | JSA= WELL CONTROL |
| | 7:15 - 17:30 | 10.25 | WO/REP | 30 | | P | | FWP= 150 PSI CONTROL WELL W/ TMAC ND W/H NU BOPS UNLAND WELL LD HNGR RU SCAN TECH POOH SCANING TUBING 266 JNTS 210 GOOD YB, 56 JNTS BAD RB, LD BHA RD SCANNERS RU W/L RIH W/ GAUGE RING TO 6650' POOH PU 10K CBP RIH SET @ 6630' DUMP BAIL 4 SKS CEM ON CBP FILL HOLE W/ TMAC TEST TO 1000# SIW PREP TO REPAIR W/H IN AM SDFN |
| 6/22/2011 | 7:00 - 7:15 | 0.25 | WO/REP | 48 | | P | | JSA= TONG SAFETY |
| | 7:15 - 17:00 | 9.75 | WO/REP | 30 | | P | | 0 PSI ON WELL ND BOPS ND W/H PU INT CUTTER RIH CUT CSG BELOW HNGR @ PUP PU OVERSHOT RIH RU W/L & TONGS APPLY LH TORQUE SET OFF STRING SHOT B/O PUP POOH PU 10' PUP RIH THREAD ONTO CSG TORQUE ALL TO 7000 FT/# PULL 90000# ON CSG RU TESTERS TEST TO 3500# SET SLIPS NU WELLHEAD RD RIG MOVE TO 6N1AS RU RIG |



RECEIVED Jul. 06, 2011

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:** 720 929-6515 Ext

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ✓ SUBSEQUENT REPORT Date of Work Completion: 7/12/2011 | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ✓ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ✓ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

THE OPERATOR HAS PERFORMED THE RECOMPLETION ON THE SUBJECT WELL. THE OPERATOR HAS RECOMPLETED THE WASATCH FORMATION. THE OPERATOR HAS COMMINGLED THE NEWLY WASATCH FORMATION WITH THE EXISTING MESAVERDE FORMATION. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 07/12/2011 AT 9:15 AM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the Utah Division of Oil, Gas and Mining**

**FOR RECORD ONLY**

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Sheila Wopsock | 435 781-7024 | Regulatory Analyst |
| **SIGNATURE** N/A | | **DATE** 7/12/2011 |

RECEIVED Jul. 12, 2011

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU38419

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☒ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator KERR MCGEE OIL & GAS ONSHORE LP — Contact: GINA T. BECKER — E-Mail: gina.becker@anadarko.com

8. Lease Name and Well No. BONANZA 1023-6N1CS

3. Address POBOX 173779 DENVER, CO 80217

3a. Phone No. (include area code) Ph: 720-929-6086

9. API Well No. 43-047-50454

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NWSW 1550FSL 739FWL 39.974950 N Lat, 109.375500 W Lon

At top prod interval reported below SESW 962FSL 2140FWL

At total depth SESW 978FSL 2153FWL

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 6 T10S R23E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 04/07/2010

15. Date T.D. Reached 05/23/2010

16. Date Completed ☐ D & A ☒ Ready to Prod. 07/12/2011

17. Elevations (DF, KB, RT, GL)* 5144 GL

18. Total Depth: MD 8800 TVD 8495

19. Plug Back T.D.: MD 8750 TVD 8445

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
GR/CBL-BHP-HDIL/ZDL/CNGR

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☑ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

| Hole Size | Size/Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sks. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|---|---|---|---|---|---|---|---|---|---|
| 20.000 | 14.000 STL | 36.7 | | 40 | | 28 | | | |
| 11.000 | 8.625 IJ-55 | 28.0 | | 1919 | | 425 | | 0 | |
| 7.875 | 4.500 I-80 | 11.6 | | 8789 | | 1202 | | 2000 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

24. Tubing Record

| Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|---|---|---|---|---|---|---|---|---|
| 2.375 | 8430 | | | | | | | |

25. Producing Intervals / 26. Perforation Record

| | Formation | Top | Bottom | Perforated Interval | Size | No. Holes | Perf. Status |
|---|---|---|---|---|---|---|---|
| A) | WASATCH | 5498 | 6538 | 5498 TO 6538 | 0.360 | 65 | OPEN |
| B) | LUSMVD | | | | | | |
| C) | | | | | | | |
| D) | | | | | | | |

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material |
|---|---|
| 5498 TO 6538 | PUMP 2,522 BBLS SLICK H20 59,522 LBS SAND |
| | |
| | |
| | |

28. Production - Interval A

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| 07/12/2011 | 07/29/2011 | 24 | → | 0.0 | 1866.0 | 85.0 | | | FLOWS FROM WELL |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| 20/64 | 166 SI | 744.0 | → | 0 | 1866 | 85 | | PGW |

28a. Production - Interval B

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

RECEIVED
AUG 29 2011
DIV. OF OIL, GAS & MINING

*(See Instructions and spaces for additional data on reverse side)*

**ELECTRONIC SUBMISSION #116078 VERIFIED BY THE BLM WELL INFORMATION SYSTEM**

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

28b. Production - Interval C

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

28c. Production - Interval D

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

| Formation | Top | Bottom | Descriptions, Contents, etc. | Name | Top Meas. Depth |
|---|---|---|---|---|---|
| GREEN RIVER | 1116 | | | | |
| BIRD'S NEST | 1377 | | | | |
| MAHOGANY | 1738 | | | | |
| WASATCH | 4313 | 6542 | | | |
| MESAVERDE | 6542 | 8800 | | | |

32. Additional remarks (include plugging procedure):
Attached is the chronological recompletion history and perforation report.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #116078 Verified by the BLM Well Information System.**
**For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal**

Name *(please print)* GINA T. BECKER Title REGULATORY ANALYST

Signature (Electronic Submission) Date 08/24/2011

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS BLUE | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: MILES 2/2 |
| Event: RECOMPL/RESEREVEADD | Start Date: 6/30/2011 | End Date: 7/11/2011 |
| Active Datum: RKB @5,158.00ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 6/30/2011 | 7:00 - 15:00 | 8.00 | COMP | 33 | C | P | | LOCK OPEN & FILL SURFACE CSG. PSI TEST CSG & FRAC VALVES.<br>PSI TEST T/ 1000 PSI. HOLD FOR 15 MIN. LOST 6 PSI.<br>PSI TEST T/ 3500 PSI. HOLD FOR 15 MIN. LOST 19 PSI.<br>1ST TEST T/ 6200 PSI. HOLD FOR 30 MIN. LOST 50 PSI.<br>GOOD TEST. BLEED OFF PSI. SWI. MOVE T/ NEXT WELL. |
| 7/1/2011 | 7:00 - 18:00 | 11.00 | COMP | 37 | B | P | | PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER STG 1 PERF DESIGN. POOH. SWIFN. |
| 7/2/2011 | 14:30 - 18:00 | 3.50 | COMP | 36 | B | P | | FRAC STG 1)WHP 155 PSI, BRK 2100 PSI @ 4.1 BPM. ISIP 1198 PSI, FG .63.<br>PUMPED 94 BBLS OF PAD. HAD TO SHUT DOWN TO GET THE BIO PUMP GOING.<br>PUMP 100 BBLS @ 51.6 BPM @ 4763 PSI = 86% HOLES OPEN.<br>ISIP 1794 PSI, FG .72, NPI 596 PSI.<br>MP 5741 PSI, MR 52.5 BPM, AP 4437 PSI, AR 51.4 BPM,<br>PMP 948 BBLS SW & 18,514 LBS OF 30/50 SND & 2489 LBS OF 20/40 RESIN SND. TOTAL PROP 21,003 LBS. SWI, X-OVER FOR WL.<br><br>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6238' P/U PERF AS PER STG 2 PERF DESIGN. POOH, X-OVER FOR FRAC CREW.<br><br>FRAC STG 2)WHP 41 PSI, BRK 1888 PSI @ 3.9 BPM. ISIP 1377 PSI, FG .66.<br>PUMP 100 BBLS @ 47.9 BPM @ 4688 PSI = 72% HOLES OPEN.<br>ISIP 1635 PSI, FG .71, NPI 258 PSI.<br>MP 4978 PSI, MR 50.6 BPM, AP 4390 PSI, AR 49.8 BPM,<br>PMP 627 BBLS SW & 12,137 LBS OF 30/50 SND & 2576 LBS OF 20/40 RESIN SND. TOTAL PROP 14,713 LBS. SWI. SDFWE. |
| 7/5/2011 | 7:00 - 7:15 | 0.25 | COMP | 48 | | P | | HSM. |

US ROCKIES REGION

# Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS BLUE | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: MILES 2/2 |
| Event: RECOMPL/RESEREVEADD | Start Date: 6/30/2011 | End Date: 7/11/2011 |
| Active Datum: RKB @5,158.00ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 7:15 - 7:15 | 0.00 | COMP | 36 | E | P | | PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=5,725', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW<br><br>FRAC STG #3] WHP=322#, BRK DN PERFS=1,950#, @=2.7 BPM, INJ RT=49.8, INJ PSI=4,810#, ISIP=549#, FG=.54, PUMP'D 947 BBLS SLK WTR W/ 21,168# 30/50 MESH W/ 2,638# RESIN COAT IN TAIL W/ 23,806# TOTAL PROP PUMP'D, ISIP=1,543#, FG=.72, AR=49.5, AP=4,392#, MR=50.4, MP=5,115#, NPI=944#, 15/20 CALC PERFS OPEN 75%. X OVER TO WIRE LINE<br><br>P/U RIH W/ HALIBURTON 8K CBP SET FOR TOP KILL @=5,448'<br><br>2,522 TOTAL BBLS<br>59.522# TOTAL SAND<br>324 GALS SCALE INHIB<br>56 GALS BIO |
| 7/8/2011 | 7:00 - 7:30 | 0.50 | COMP | 48 | | P | | TRIPPING TBG |
| | 7:30 - 17:00 | 9.50 | COMP | 44 | | P | | MIRU, NDWH, NU BOP'S, TEST BOP'S, PU SLIDING SLEEVE,BIT, BIT SUB, TIH WITH 172 JTS TBG, TAG CBP# 1, MILL OUT PLUGS, CLEAN OUT TO 6570', SWIFWE<br>PLUG# 1 5446' 10' SAND 7 MIN 0# KICK<br>PLUG# 2 5725' 50' SAND 10 MIN 0# KICK<br>PLUG# 3 6238' 40' SAND 8 MIN 0# KICK |
| 7/11/2011 | 7:00 - 7:30 | 0.50 | COMP | 48 | | P | | LANDING TBG |
| | 7:30 - 10:30 | 3.00 | COMP | 44 | | P | | FLOW BACK CSG, 1500#, WELL CAME ON, POOH 12 JTS TO 6215.69', LAND TBG, ND BOP'ES, NUWH, RU DELSCO, PULL SLEEVE, SET PLUG RTP, RDMO TO B0N 1023-6N4BS<br>TBG 196 JTS 6197.76'<br>KB 15.00'<br>SLIDING SLEEVE 2.10'<br>HANGER .83'<br>EOT 6215.69'<br>WTR PUMPED 2525 BBLS<br>TWR 100 BBLS<br>LTR 2425 BBLS |
| 7/12/2011 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 500#, TP 100#, OPEN/64" CK, 5 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 285<br>BBLS LEFT TO RECOVER: 2240 |
| | 9:15 - 9:15 | 0.00 | PROD | 50 | | | | WELL TURNED TO SALES @ 0915 HR ON 7/12/11 - 500 MCFD, 120 BWPD, CP 450#, FTP 300#, CK 20/64" |
| 7/13/2011 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 600#, TP 400#, 20/64" CK, 5 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 405<br>BBLS LEFT TO RECOVER: 2120 |
| 7/14/2011 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 550#, TP 400#, 20/64" CK, 5 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 525<br>BBLS LEFT TO RECOVER: 2000 |

US ROCKIES REGION

# Operation Summary Report

| | | | |
|---|---|---|---|
| Well: BONANZA 1023-6N1CS BLUE | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 | |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | | Rig Name No: MILES 2/2 |
| Event: RECOMPL/RESEREVEADD | Start Date: 6/30/2011 | | End Date: 7/11/2011 |
| Active Datum: RKB @5,158.00ft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (ft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 7/15/2011 | 7:00 - | | | 33 | A | | | 7 AM FLBK REPORT: CP 600#, TP 400#, 20/64" CK, 5 BWPH, TRACE SAND, - GAS<br>TTL BBLS RECOVERED: 645<br>BBLS LEFT TO RECOVER: 1880 |
| 7/25/2011 | 7:00 - 7:30 | 0.50 | COMP | 48 | | P | | JSA, SAFTY MEETING |
| | 7:30 - 19:00 | 11.50 | COMP | 44 | | P | | MIRU, RU DELSCO, PULL PLUG, RUN SLIDING SLEEVE, NDWH, NU BOP'S, TIH 11 JTS, TAG CEMENT TOP @ 6539', BREAK CIRC IN 20 MINS W/ FOAM UNIT, DRILL CEMENT, CBP, 300# KICK, TIH 278 JTS TAG PBTD @8785, BREAK CIRC WITH FOAM UNIT, POOH LAY DWN 15 JTS TO 8430', ND BOP'S, NU .<br><br>JTS 266 JTS L-80 8412.90'<br>KB 15.00'<br>SLIDING SLEEVE 2.10<br>EOT 8430'<br>PBTD 8787 BTM PERF 8766' |
| 7/29/2011 | 7:00 - | | | 50 | | | | WELL IP'D ON 7/29/11- 1866 MCFD, 0 BOPD, 85 BWPD, CP 744#, FTP 166#, CK 20/64", LP 71#, 24 HRS |

# 1 General

## 1.1 Customer Information

| | |
|---|---|
| **Company** | US ROCKIES REGION |
| **Representative** | |
| **Address** | |

## 1.2 Well Information

| | | | |
|---|---|---|---|
| **Well** | BONANZA 1023-6N1CS BLUE | | |
| **Common Name** | BONANZA 1023-6N1CS | | |
| **Well Name** | BONANZA 1023-6N1CS | **Wellbore No.** | OH |
| **Report No.** | 1 | **Report Date** | 6/22/2011 |
| **Project** | UTAH-UINTAH | **Site** | BONANZA 1023-6L PAD |
| **Rig Name/No.** | | **Event** | RECOMPL/RESEREVEADD |
| **Start Date** | 6/22/2011 | **End Date** | 7/11/2011 |
| **Spud Date** | 4/12/2010 | **Active Datum** | RKB @5,158.00ft (above Mean Sea Level) |
| **UWI** | NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | | |

## 1.3 General

| | | | | | |
|---|---|---|---|---|---|
| **Contractor** | | **Job Method** | PERFORATE | **Supervisor** | |
| **Perforated Assembly** | PRODUCTION CASING | **Conveyed Method** | WIRELINE | | |

## 1.4 Initial Conditions

| | | | |
|---|---|---|---|
| **Fluid Type** | | **Fluid Density** | |
| **Surface Press** | | **Estimate Res Press** | |
| **TVD Fluid Top** | | **Fluid Head** | |
| **Hydrostatic Press** | | **Press Difference** | |
| **Balance Cond** | NEUTRAL | | |

## 1.5 Summary

| | | | |
|---|---|---|---|
| **Gross Interval** | 5,498.0 (ft)-6,538.0 (ft) | **Start Date/Time** | 6/28/2011 12:00AM |
| **No. of Intervals** | 10 | **End Date/Time** | 6/28/2011 12:00AM |
| **Total Shots** | 65 | **Net Perforation Interval** | 18.00 (ft) |
| **Avg Shot Density** | 3.61 (shot/ft) | **Final Surface Pressure** | |
| | | **Final Press Date** | |

# 2 Intervals

## 2.1 Perforated Interval

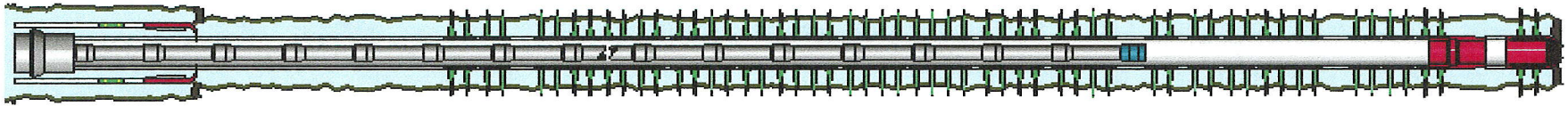
| Date | Formation/ Reservoir | CCL@ (ft) | CCL-TS (ft) | MD Top (ft) | MD Base (ft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Carr Manuf | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00AM | WASATCH/ | | | 5,498.0 | 5,500.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |

### 2.1 Perforated Interval (Continued)

| Date | Formation/ Reservoir | CCL@ (ft) | CCL-TS (ft) | MD Top (ft) | MD Base (ft) | Shot Density (shot/ft) | Misfires/ Add. Shot | Diameter (in) | Carr Type /Carr Manuf | Carr Size (in) | Phasing (°) | Charge Desc /Charge Manufacturer | Charge Weight (gram) | Reason | Misrun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00AM | WASATCH/ | | | 5,622.0 | 5,625.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,014.0 | 6,016.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,048.0 | 6,050.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,186.0 | 6,188.0 | 4.00 | | 0.360 | EXP/ | 3.375 | 90.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,288.0 | 6,289.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,327.0 | 6,328.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,373.0 | 6,375.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,497.0 | 6,498.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |
| 12:00AM | WASATCH/ | | | 6,536.0 | 6,538.0 | 3.00 | | 0.360 | EXP/ | 3.375 | 120.00 | | 23.00 | PRODUCTION | |

## 3 Plots

### 3.1 Wellbore Schematic



**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

# ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6029

**Well 1**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| See Atchmt | See Atchmt | | | | | | |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| | 99999 | 18519 | | | | 5/1/2012 | |

**Comments:** Please see attachment with list of Wells in the Ponderosa Unit. 5/30/2012
lwsmvd

**Well 2**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| | | | | | | | |

**Comments:**

**Well 3**

| API Number | Well Name | | QQ | Sec | Twp | Rng | County |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **Action Code** | **Current Entity Number** | **New Entity Number** | **Spud Date** | | | **Entity Assignment Effective Date** | |
| | | | | | | | |

**Comments:**

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

RECEIVED
MAY 21 2012
Div. of Oil, Gas & Mining

Cara Mahler
**Name (Please Print)**

**Signature**

REGULATORY ANALYST
**Title**

5/21/2012
**Date**

(5/2000)

| well_name | sec | twp | rng | api | entity | | lease | well | stat | qtr_qtr | bhl | surf | zone | a_stat | l_num | op_no |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHMAN CANYON 31-3 | 31 | 090S | 230E | 4304734726 | 13717 | | 1 | GW | P | SENW | | 1 | WSMVD | P | U-33433 | N2995 |
| SOUTHMAN CANYON 31-4 | 31 | 090S | 230E | 4304734727 | 13742 | | 1 | GW | S | SESW | | 1 | WSMVD | S | UTU-33433 | N2995 |
| SOUTHMAN CYN 31-2X (RIG SKID) | 31 | 090S | 230E | 4304734898 | 13755 | | 1 | GW | P | NWNW | | 1 | WSMVD | P | U-33433 | N2995 |
| SOUTHMAN CYN 923-31J | 31 | 090S | 230E | 4304735149 | 13994 | | 1 | GW | P | NWSE | | 1 | MVRD | P | U-33433 | N2995 |
| SOUTHMAN CYN 923-31B | 31 | 090S | 230E | 4304735150 | 13953 | | 1 | GW | P | NWNE | | 1 | MVRD | P | U-33433 | N2995 |
| SOUTHMAN CYN 923-31P | 31 | 090S | 230E | 4304735288 | 14037 | | 1 | GW | P | SESE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31H | 31 | 090S | 230E | 4304735336 | 14157 | | 1 | GW | P | SENE | | 1 | WSMVD | P | U-33433 | N2995 |
| SOUTHMAN CYN 923-31O | 31 | 090S | 230E | 4304737205 | 16827 | | 1 | GW | P | SWSE | | 1 | MVRD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31K | 31 | 090S | 230E | 4304737206 | 16503 | | 1 | GW | P | NESW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31G | 31 | 090S | 230E | 4304737208 | 16313 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31E | 31 | 090S | 230E | 4304737209 | 16521 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31A | 31 | 090S | 230E | 4304737210 | 16472 | | 1 | GW | P | NENE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| SOUTHMAN CYN 923-31C | 31 | 090S | 230E | 4304737227 | 16522 | | 1 | GW | P | NENW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-1G | 01 | 100S | 230E | 4304735512 | 14458 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | U-40736 | N2995 |
| BONANZA 1023-1A | 01 | 100S | 230E | 4304735717 | 14526 | | 1 | GW | P | NENE | | 1 | WSMVD | P | U-40736 | N2995 |
| BONANZA 1023-1E | 01 | 100S | 230E | 4304735745 | 14524 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | U-40736 | N2995 |
| BONANZA 1023-1C | 01 | 100S | 230E | 4304735754 | 14684 | | 1 | GW | P | NENW | | 1 | MVRD | P | U-40736 | N2995 |
| BONANZA 1023-1K | 01 | 100S | 230E | 4304735755 | 15403 | | 1 | GW | P | NESW | | 1 | MVRD | P | U-38423 | N2995 |
| BONANZA 1023-1F | 01 | 100S | 230E | 4304737379 | 16872 | | 1 | GW | P | SENW | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-1B | 01 | 100S | 230E | 4304737380 | 16733 | | 1 | GW | P | NWNE | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-1D | 01 | 100S | 230E | 4304737381 | 16873 | | 1 | GW | P | NWNW | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-1H | 01 | 100S | 230E | 4304737430 | 16901 | | 1 | GW | P | SENE | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-1L | 01 | 100S | 230E | 4304738300 | 16735 | | 1 | GW | P | NWSW | | 1 | MVRD | P | UTU-38423 | N2995 |
| BONANZA 1023-1J | 01 | 100S | 230E | 4304738302 | 16871 | | 1 | GW | P | NWSE | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-1I | 01 | 100S | 230E | 4304738810 | 16750 | | 1 | GW | P | NESE | | 1 | MVRD | P | UTU-40736 | N2995 |
| BONANZA 1023-2E | 02 | 100S | 230E | 4304735345 | 14085 | | 3 | GW | P | SWNW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2C | 02 | 100S | 230E | 4304735346 | 14084 | | 3 | GW | P | NENW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2A | 02 | 100S | 230E | 4304735347 | 14068 | | 3 | GW | P | NENE | | 3 | MVRD | P | ML-47062 | N2995 |
| BONANZA 1023-2G | 02 | 100S | 230E | 4304735661 | 14291 | | 3 | GW | P | SWNE | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2O | 02 | 100S | 230E | 4304735662 | 14289 | | 3 | GW | P | SWSE | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2I | 02 | 100S | 230E | 4304735663 | 14290 | | 3 | GW | S | NESE | | 3 | WSMVD | S | ML-47062 | N2995 |
| BONANZA 1023-2MX | 02 | 100S | 230E | 4304736092 | 14730 | | 3 | GW | P | SWSW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2H | 02 | 100S | 230E | 4304737093 | 16004 | | 3 | GW | P | SENE | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2D | 02 | 100S | 230E | 4304737094 | 15460 | | 3 | GW | P | NWNW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2B | 02 | 100S | 230E | 4304737095 | 15783 | | 3 | GW | P | NWNE | | 3 | MVRD | P | ML-47062 | N2995 |
| BONANZA 1023-2P | 02 | 100S | 230E | 4304737223 | 15970 | | 3 | GW | P | SESE | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2N | 02 | 100S | 230E | 4304737224 | 15887 | | 3 | GW | P | SESW | | 3 | MVRD | P | ML-47062 | N2995 |
| BONANZA 1023-2L | 02 | 100S | 230E | 4304737225 | 15833 | | 3 | GW | P | NWSW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2F | 02 | 100S | 230E | 4304737226 | 15386 | | 3 | GW | P | SENW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2D-4 | 02 | 100S | 230E | 4304738761 | 16033 | | 3 | GW | P | NWNW | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2O-1 | 02 | 100S | 230E | 4304738762 | 16013 | | 3 | GW | P | SWSE | | 3 | WSMVD | P | ML-47062 | N2995 |
| BONANZA 1023-2H3CS | 02 | 100S | 230E | 4304750344 | 17426 | | 3 | GW | P | NWNE | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2G3BS | 02 | 100S | 230E | 4304750345 | 17428 | | 3 | GW | P | NWNE | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2G2CS | 02 | 100S | 230E | 4304750346 | 17429 | | 3 | GW | P | NWNE | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2G1BS | 02 | 100S | 230E | 4304750347 | 17427 | | 3 | GW | P | NWNE | D | 3 | MVRD | P | ML 47062 | N2995 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-2M1S | 02 | 100S | 230E | 4304750379 | 17443 | | 3 | GW | P | SENW | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2L2S | 02 | 100S | 230E | 4304750380 | 17444 | | 3 | GW | P | SENW | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2K4S | 02 | 100S | 230E | 4304750381 | 17446 | | 3 | GW | P | SENW | D | 3 | MVRD | P | ML 47062 | N2995 |
| BONANZA 1023-2K1S | 02 | 100S | 230E | 4304750382 | 17445 | | 3 | GW | P | SENW | D | 3 | WSMVD | P | ML 47062 | N2995 |
| BONANZA 4-6 * | 04 | 100S | 230E | 4304734751 | 13841 | | 1 | GW | P | NESW | | 1 | MNCS | P | UTU-33433 | N2995 |
| BONANZA 1023-4A | 04 | 100S | 230E | 4304735360 | 14261 | | 1 | GW | P | NENE | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-4E | 04 | 100S | 230E | 4304735392 | 14155 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-4C | 04 | 100S | 230E | 4304735437 | 14252 | | 1 | GW | P | NENW | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-4M | 04 | 100S | 230E | 4304735629 | 14930 | | 1 | GW | P | SWSW | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-4O | 04 | 100S | 230E | 4304735688 | 15111 | | 1 | GW | P | SWSE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4I | 04 | 100S | 230E | 4304735689 | 14446 | | 1 | GW | P | NESE | | 1 | MVRD | P | UTU-33433 | N2995 |
| BONANZA 1023-4G | 04 | 100S | 230E | 4304735746 | 14445 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4D | 04 | 100S | 230E | 4304737315 | 16352 | | 1 | GW | P | NWNW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4H | 04 | 100S | 230E | 4304737317 | 16318 | | 1 | GW | P | SENE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4B | 04 | 100S | 230E | 4304737328 | 16351 | | 1 | GW | P | NWNE | | 1 | MVRD | P | UTU-33433 | N2995 |
| BONANZA 1023-4L | 04 | 100S | 230E | 4304738211 | 16393 | | 1 | GW | P | NWSW | | 1 | MVRD | P | UTU-33433 | N2995 |
| BONANZA 1023-4P | 04 | 100S | 230E | 4304738212 | 16442 | | 1 | GW | P | SESE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4N | 04 | 100S | 230E | 4304738303 | 16395 | | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-4FX (RIGSKID) | 04 | 100S | 230E | 4304739918 | 16356 | | 1 | GW | P | SENW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5O | 05 | 100S | 230E | 4304735438 | 14297 | | 1 | GW | P | SWSE | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-5AX (RIGSKID) | 05 | 100S | 230E | 4304735809 | 14243 | | 1 | GW | P | NENE | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-5C | 05 | 100S | 230E | 4304736176 | 14729 | | 1 | GW | P | NENW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5G | 05 | 100S | 230E | 4304736177 | 14700 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5M | 05 | 100S | 230E | 4304736178 | 14699 | | 1 | GW | P | SWSW | | 1 | WSMVD | P | UTU-73450 | N2995 |
| BONANZA 1023-5K | 05 | 100S | 230E | 4304736741 | 15922 | | 1 | GW | P | NESW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5B | 05 | 100S | 230E | 4304737318 | 16904 | | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5E | 05 | 100S | 230E | 4304737319 | 16824 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5H | 05 | 100S | 230E | 4304737320 | 16793 | | 1 | GW | P | SENE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5N | 05 | 100S | 230E | 4304737321 | 16732 | | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-73450 | N2995 |
| BONANZA 1023-5L | 05 | 100S | 230E | 4304737322 | 16825 | | 1 | GW | P | NWSW | | 1 | MVRD | P | UTU-33433 | N2995 |
| BONANZA 1023-5J | 05 | 100S | 230E | 4304737428 | 17055 | | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5P | 05 | 100S | 230E | 4304738213 | 16795 | | 1 | GW | P | SESE | | 1 | MVRD | P | UTU-33433 | N2995 |
| BONANZA 1023-5N-1 | 05 | 100S | 230E | 4304738911 | 17060 | | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-73450 | N2995 |
| BONANZA 1023-5PS | 05 | 100S | 230E | 4304750169 | 17323 | | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-5G2AS | 05 | 100S | 230E | 4304750486 | 17459 | | 1 | GW | P | SWNE | D | 1 | MVRD | P | UTU 33433 | N2995 |
| BONANZA 1023-5G2CS | 05 | 100S | 230E | 4304750487 | 17462 | | 1 | GW | P | SWNE | D | 1 | MVRD | P | UTU 33433 | N2995 |
| BONANZA 1023-5G3BS | 05 | 100S | 230E | 4304750488 | 17461 | | 1 | GW | P | SWNE | D | 1 | MVRD | P | UTU 33433 | N2995 |
| BONANZA 1023-5G3CS | 05 | 100S | 230E | 4304750489 | 17460 | | 1 | GW | P | SWNE | D | 1 | MVRD | P | UTU 33433 | N2995 |
| BONANZA 1023-5N4AS | 05 | 100S | 230E | 4304752080 | 18484 | | 1 | GW | DRL | SWSW | D | 1 | WSMVD | DRL | UTU73450 | N2995 |
| BONANZA 1023-8C2DS | 05 | 100S | 230E | 4304752081 | 18507 | | 1 | GW | DRL | SWSW | D | 1 | WSMVD | DRL | UTU37355 | N2995 |
| BONANZA 6-2 | 06 | 100S | 230E | 4304734843 | 13796 | | 1 | GW | TA | NESW | | 1 | WSMVD | TA | UTU-38419 | N2995 |
| BONANZA 1023-6C | 06 | 100S | 230E | 4304735153 | 13951 | | 1 | GW | P | NENW | | 1 | MVRD | P | U-38419 | N2995 |
| BONANZA 1023-6E | 06 | 100S | 230E | 4304735358 | 14170 | | 1 | GW | P | SWNW | | 1 | MVRD | P | U-38419 | N2995 |
| BONANZA 1023-6M | 06 | 100S | 230E | 4304735359 | 14233 | | 1 | GW | P | SWSW | | 1 | WSMVD | P | U-38419 | N2995 |
| BONANZA 1023-6G | 06 | 100S | 230E | 4304735439 | 14221 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6O | 06 | 100S | 230E | 4304735630 | 14425 | | 1 | GW | TA | SWSE | | 1 | WSMVD | TA | U-38419 | N2995 |

* not moved in unit

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-6A | 06 | 100S | 230E | 4304736067 | 14775 | | 1 | GW | P | NENE | | 1 | WSMVD | P | U-33433 | N2995 |
| BONANZA 1023-6N | 06 | 100S | 230E | 4304737211 | 15672 | | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6L | 06 | 100S | 230E | 4304737212 | 15673 | | 1 | GW | P | NWSW | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6J | 06 | 100S | 230E | 4304737213 | 15620 | | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6F | 06 | 100S | 230E | 4304737214 | 15576 | | 1 | GW | TA | SENW | | 1 | WSMVD | TA | UTU-38419 | N2995 |
| BONANZA 1023-6P | 06 | 100S | 230E | 4304737323 | 16794 | | 1 | GW | P | SESE | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6H | 06 | 100S | 230E | 4304737324 | 16798 | | 1 | GW | S | SENE | | 1 | WSMVD | S | UTU-33433 | N2995 |
| BONANZA 1023-6D | 06 | 100S | 230E | 4304737429 | 17020 | | 1 | GW | P | NWNW | | 1 | WSMVD | P | UTU-38419 | N2995 |
| BONANZA 1023-6B | 06 | 100S | 230E | 4304740398 | 18291 | | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-33433 | N2995 |
| BONANZA 1023-6M1BS | 06 | 100S | 230E | 4304750452 | 17578 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6N1AS | 06 | 100S | 230E | 4304750453 | 17581 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6N1CS | 06 | 100S | 230E | 4304750454 | 17580 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6N4BS | 06 | 100S | 230E | 4304750455 | 17579 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6I2S | 06 | 100S | 230E | 4304750457 | 17790 | | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6I4S | 06 | 100S | 230E | 4304750458 | 17792 | | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6J3S | 06 | 100S | 230E | 4304750459 | 17791 | | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6P1S | 06 | 100S | 230E | 4304750460 | 17793 | | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6A2CS | 06 | 100S | 230E | 4304751430 | 18292 | | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU33433 | N2995 |
| BONANZA 1023-6B4BS | 06 | 100S | 230E | 4304751431 | 18293 | | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU33433 | N2995 |
| BONANZA 1023-6B4CS | 06 | 100S | 230E | 4304751432 | 18294 | | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU33433 | N2995 |
| BONANZA 1023-6C4BS | 06 | 100S | 230E | 4304751449 | 18318 | | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU38419 | N2995 |
| BONANZA 1023-6D1DS | 06 | 100S | 230E | 4304751451 | 18316 | | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU38419 | N2995 |
| FLAT MESA FEDERAL 2-7 | 07 | 100S | 230E | 4304730545 | 18244 | | 1 | GW | S | NENW | | 1 | WSMVD | S | U-38420 | N2995 |
| BONANZA 1023-7B | 07 | 100S | 230E | 4304735172 | 13943 | | 1 | GW | P | NWNE | | 1 | MVRD | P | U-38420 | N2995 |
| BONANZA 1023-7L | 07 | 100S | 230E | 4304735289 | 14054 | | 1 | GW | P | NWSW | | 1 | WSMVD | P | U-38420 | N2995 |
| BONANZA 1023-7D | 07 | 100S | 230E | 4304735393 | 14171 | | 1 | GW | P | NWNW | | 1 | WSMVD | P | U-38420 | N2995 |
| BONANZA 1023-7P | 07 | 100S | 230E | 4304735510 | 14296 | | 1 | GW | P | SESE | | 1 | WSMVD | P | U-38420 | N2995 |
| BONANZA 1023-7H | 07 | 100S | 230E | 4304736742 | 15921 | | 1 | GW | P | SENE | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7NX (RIGSKID) | 07 | 100S | 230E | 4304736932 | 15923 | | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7M | 07 | 100S | 230E | 4304737215 | 16715 | | 1 | GW | P | SWSW | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7K | 07 | 100S | 230E | 4304737216 | 16714 | | 1 | GW | P | NESW | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7E | 07 | 100S | 230E | 4304737217 | 16870 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7G | 07 | 100S | 230E | 4304737326 | 16765 | | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7A | 07 | 100S | 230E | 4304737327 | 16796 | | 1 | GW | P | NENE | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7O | 07 | 100S | 230E | 4304738304 | 16713 | | 1 | GW | P | SWSE | | 1 | MVRD | P | UTU-38420 | N2995 |
| BONANZA 1023-7B-3 | 07 | 100S | 230E | 4304738912 | 17016 | | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-07JT | 07 | 100S | 230E | 4304739390 | 16869 | | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU-38420 | N2995 |
| BONANZA 1023-7J2AS | 07 | 100S | 230E | 4304750474 | 17494 | | 1 | GW | P | NWSE | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7J2DS | 07 | 100S | 230E | 4304750475 | 17495 | | 1 | GW | P | NWSE | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7L3DS | 07 | 100S | 230E | 4304750476 | 17939 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7M2AS | 07 | 100S | 230E | 4304750477 | 17942 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7N2AS | 07 | 100S | 230E | 4304750478 | 17940 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7N2DS | 07 | 100S | 230E | 4304750479 | 17941 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7O4S | 07 | 100S | 230E | 4304750480 | 17918 | | 1 | GW | P | SESE | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 1023-7P2S | 07 | 100S | 230E | 4304750482 | 17919 | | 1 | GW | P | SESE | D | 1 | WSMVD | P | UTU 38420 | N2995 |
| BONANZA 8-2 | 08 | 100S | 230E | 4304734087 | 13851 | | 1 | GW | P | SESE | | 1 | MVRD | P | U-37355 | N2995 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BONANZA 8-3 | 08 | 100S | 230E | 4304734770 | 13843 | 1 | GW | P | NWNW | | 1 | MVRD | P | U-37355 | N2995 |
| BONANZA 1023-8A | 08 | 100S | 230E | 4304735718 | 14932 | 1 | GW | P | NENE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8L | 08 | 100S | 230E | 4304735719 | 14876 | 1 | GW | P | NWSW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8N | 08 | 100S | 230E | 4304735720 | 15104 | 1 | GW | P | SESW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8F | 08 | 100S | 230E | 4304735989 | 14877 | 1 | GW | S | SENW | | 1 | WSMVD | S | UTU-37355 | N2995 |
| BONANZA 1023-8I | 08 | 100S | 230E | 4304738215 | 16358 | 1 | GW | P | NESE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8K | 08 | 100S | 230E | 4304738216 | 16354 | 1 | GW | P | NESW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8M | 08 | 100S | 230E | 4304738217 | 16564 | 1 | GW | P | SWSW | | 1 | MVRD | P | UTU-37355 | N2995 |
| BONANZA 1023-8G | 08 | 100S | 230E | 4304738218 | 16903 | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8E | 08 | 100S | 230E | 4304738219 | 16397 | 1 | GW | P | SWNW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8C | 08 | 100S | 230E | 4304738220 | 16355 | 1 | GW | P | NENW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8B | 08 | 100S | 230E | 4304738221 | 16292 | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8H | 08 | 100S | 230E | 4304738222 | 16353 | 1 | GW | P | SENE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8O | 08 | 100S | 230E | 4304738305 | 16392 | 1 | GW | P | SWSE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8B-4 | 08 | 100S | 230E | 4304738914 | 17019 | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-8A1DS | 08 | 100S | 230E | 4304750481 | 17518 | 1 | GW | P | NENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8A4BS | 08 | 100S | 230E | 4304750483 | 17519 | 1 | GW | P | NENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8B1AS | 08 | 100S | 230E | 4304750484 | 17520 | 1 | GW | P | NENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8B2AS | 08 | 100S | 230E | 4304750485 | 17521 | 1 | GW | P | NENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8O2S | 08 | 100S | 230E | 4304750495 | 17511 | 1 | GW | P | NWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8J1S | 08 | 100S | 230E | 4304750496 | 17509 | 1 | GW | P | NWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8O3S | 08 | 100S | 230E | 4304750497 | 17512 | 1 | GW | P | NWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8J3 | 08 | 100S | 230E | 4304750498 | 17510 | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8C4CS | 08 | 100S | 230E | 4304750499 | 17544 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8D2DS | 08 | 100S | 230E | 4304750500 | 17546 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8D3DS | 08 | 100S | 230E | 4304750501 | 17545 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8F3DS | 08 | 100S | 230E | 4304750502 | 17543 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8A4CS | 08 | 100S | 230E | 4304751131 | 18169 | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8B3BS | 08 | 100S | 230E | 4304751132 | 18167 | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8C1AS | 08 | 100S | 230E | 4304751133 | 18166 | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8G3AS | 08 | 100S | 230E | 4304751134 | 18168 | 1 | GW | P | NWNE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8E2AS | 08 | 100S | 230E | 4304751135 | 18227 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8F3BS | 08 | 100S | 230E | 4304751136 | 18227 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8F4AS | 08 | 100S | 230E | 4304751137 | 18224 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8F4DS | 08 | 100S | 230E | 4304751138 | 18225 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8J2CS | 08 | 100S | 230E | 4304751139 | 18226 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8G4DS | 08 | 100S | 230E | 4304751140 | 18144 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8H2DS | 08 | 100S | 230E | 4304751141 | 18142 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8H3DS | 08 | 100S | 230E | 4304751142 | 18143 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8H4DS | 08 | 100S | 230E | 4304751143 | 18141 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8I4BS | 08 | 100S | 230E | 4304751144 | 18155 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8J4BS | 08 | 100S | 230E | 4304751145 | 18154 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8P1AS | 08 | 100S | 230E | 4304751146 | 18156 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8P2BS | 08 | 100S | 230E | 4304751147 | 18153 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8P4AS | 08 | 100S | 230E | 4304751148 | 18157 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8E2DS | 08 | 100S | 230E | 4304751149 | 18201 | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-8E3DS | 08 | 100S | 230E | 4304751150 | 18200 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8K1CS | 08 | 100S | 230E | 4304751151 | 18199 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8K4CS | 08 | 100S | 230E | 4304751152 | 18198 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8L3DS | 08 | 100S | 230E | 4304751153 | 18197 | | 1 | GW | P | NWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8M2AS | 08 | 100S | 230E | 4304751154 | 18217 | | 1 | GW | P | SWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8M2DS | 08 | 100S | 230E | 4304751155 | 18216 | | 1 | GW | P | SWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8N2BS | 08 | 100S | 230E | 4304751156 | 18218 | | 1 | GW | P | SWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8O3CS | 08 | 100S | 230E | 4304751157 | 18254 | | 1 | GW | P | SWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8N3DS | 08 | 100S | 230E | 4304751158 | 18215 | | 1 | GW | P | SWSW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8O4AS | 08 | 100S | 230E | 4304751159 | 18252 | | 1 | GW | P | SWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8P2CS | 08 | 100S | 230E | 4304751160 | 18251 | | 1 | GW | P | SWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-8P3CS | 08 | 100S | 230E | 4304751161 | 18253 | | 1 | GW | P | SWSE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| CANYON FEDERAL 2-9 | 09 | 100S | 230E | 4304731504 | 1468 | | 1 | GW | P | NENW | | 1 | MVRD | P | U-37355 | N2995 |
| SOUTHMAN CANYON 9-3-M | 09 | 100S | 230E | 4304732540 | 11767 | | 1 | GW | S | SWSW | | 1 | MVRD | S | UTU-37355 | N2995 |
| SOUTHMAN CANYON 9-4-J | 09 | 100S | 230E | 4304732541 | 11685 | | 1 | GW | S | NWSE | | 1 | MVRD | S | UTU-37355 | N2995 |
| BONANZA 9-6 | 09 | 100S | 230E | 4304734771 | 13852 | | 1 | GW | P | NWNE | | 1 | MVRD | P | U-37355 | N2995 |
| BONANZA 9-5 | 09 | 100S | 230E | 4304734866 | 13892 | | 1 | GW | P | SESW | | 1 | MVRD | P | U-37355 | N2995 |
| BONANZA 1023-9E | 09 | 100S | 230E | 4304735620 | 14931 | | 1 | GW | P | SWNW | | 1 | WSMVD | P | U-37355 | N2995 |
| BONANZA 1023-9I | 09 | 100S | 230E | 4304738223 | 16766 | | 1 | GW | P | NESE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-9D | 09 | 100S | 230E | 4304738306 | 16398 | | 1 | GW | P | NWNW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-9J | 09 | 100S | 230E | 4304738811 | 16989 | | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-9B3BS | 09 | 100S | 230E | 4304750503 | 17965 | | 1 | GW | P | SENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-9B3CS | 09 | 100S | 230E | 4304750504 | 17968 | | 1 | GW | P | SENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-9H2BS | 09 | 100S | 230E | 4304750505 | 17966 | | 1 | GW | P | SENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-9H2CS | 09 | 100S | 230E | 4304750506 | 17967 | | 1 | GW | P | SENE | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 10-2 | 10 | 100S | 230E | 4304734704 | 13782 | | 1 | GW | P | NWNW | | 1 | MVRD | P | U-72028 | N2995 |
| BONANZA 1023-10L | 10 | 100S | 230E | 4304735660 | 15164 | | 1 | GW | P | NWSW | | 1 | WSMVD | P | U-38261 | N2995 |
| BONANZA 1023-10E | 10 | 100S | 230E | 4304738224 | 16501 | | 1 | GW | P | SWNW | | 1 | MVRD | P | UTU-72028 | N2995 |
| BONANZA 1023-10C | 10 | 100S | 230E | 4304738228 | 16500 | | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-72028 | N2995 |
| BONANZA 1023-10C-4 | 10 | 100S | 230E | 4304738915 | 17015 | | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-72028 | N2995 |
| BONANZA 11-2 ✯ | 11 | 100S | 230E | 4304734773 | 13768 | | 1 | GW | P | SWNW | | 1 | MVMCS | P | UTU-38425 | N2995 |
| BONANZA 1023-11K | 11 | 100S | 230E | 4304735631 | 15132 | | 1 | GW | P | NESW | | 1 | WSMVD | P | UTU-38425 | N2995 |
| BONANZA 1023-11B | 11 | 100S | 230E | 4304738230 | 16764 | | 1 | GW | P | NWNE | | 1 | MVRD | P | UTU-38425 | N2995 |
| BONANZA 1023-11F | 11 | 100S | 230E | 4304738232 | 16797 | | 1 | GW | P | SENW | | 1 | MVRD | P | UTU-38425 | N2995 |
| BONANZA 1023-11D | 11 | 100S | 230E | 4304738233 | 16711 | | 1 | GW | P | NWNW | | 1 | MVRD | P | UTU-38425 | N2995 |
| BONANZA 1023-11G | 11 | 100S | 230E | 4304738235 | 16826 | | 1 | GW | P | SWNE | | 1 | MVRD | P | UTU-38425 | N2995 |
| BONANZA 1023-11C | 11 | 100S | 230E | 4304738309 | 16736 | | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-38425 | N2995 |
| BONANZA 1023-11J | 11 | 100S | 230E | 4304738310 | 16839 | | 1 | GW | P | NWSE | | 1 | WSMVD | P | UTU-38424 | N2995 |
| BONANZA 1023-11N | 11 | 100S | 230E | 4304738311 | 16646 | | 1 | GW | P | SESW | | 1 | MVRD | P | UTU-38424 | N2995 |
| BONANZA 1023-11M | 11 | 100S | 230E | 4304738312 | 16687 | | 1 | GW | P | SWSW | | 1 | MVRD | P | UTU-38424 | N2995 |
| BONANZA 1023-11L | 11 | 100S | 230E | 4304738812 | 16987 | | 1 | GW | P | NWSW | | 1 | WSMVD | P | UTU-38424 | N2995 |
| NSO FEDERAL 1-12 | 12 | 100S | 230E | 4304730560 | 1480 | | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-38423 | N2995 |
| WHITE RIVER 1-14 | 14 | 100S | 230E | 4304730481 | 1500 | | 1 | GW | S | NENW | | 1 | MVRD | S | U-38427 | N2995 |
| BONANZA 1023-14D | 14 | 100S | 230E | 4304737030 | 16799 | | 1 | GW | P | NWNW | | 1 | MVRD | P | UTU-38427 | N2995 |
| BONANZA 1023-14C | 14 | 100S | 230E | 4304738299 | 16623 | | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-38427 | N2995 |
| BONANZA FEDERAL 3-15 | 15 | 100S | 230E | 4304731278 | 8406 | | 1 | GW | P | NENW | | 1 | MVRD | P | U-38428 | N2995 |

✯ not moved into unit

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BONANZA 1023-15H | 15 | 100S | 230E | 4304738316 | 16688 | 1 | GW | P | SENE | | 1 | MVRD | P | UTU-38427 | N2995 |
| BONANZA 1023-15J | 15 | 100S | 230E | 4304738817 | 16988 | 1 | GW | P | NWSE | | 1 | MVRD | P | UTU-38427 | N2995 |
| BONANZA 1023-15H4CS | 15 | 100S | 230E | 4304750741 | 17492 | 1 | GW | P | NESE | D | 1 | MVRD | P | UTU 38427 | N2995 |
| BONANZA 1023-15I2AS | 15 | 100S | 230E | 4304750742 | 17493 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38427 | N2995 |
| BONANZA 1023-15I4BS | 15 | 100S | 230E | 4304750743 | 17490 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38427 | N2995 |
| BONANZA 1023-15P1BS | 15 | 100S | 230E | 4304750744 | 17491 | 1 | GW | P | NESE | D | 1 | WSMVD | P | UTU 38427 | N2995 |
| LOOKOUT POINT STATE 1-16 | 16 | 100S | 230E | 4304730544 | 1495 | 3 | GW | P | NESE | | 3 | WSMVD | P | ML-22186-A | N2995 |
| BONANZA 1023-16J | 16 | 100S | 230E | 4304737092 | 15987 | 3 | GW | OPS | NWSE | | 3 | WSMVD | OPS | ML-22186-A | N2995 |
| BONANZA 1023-17B | 17 | 100S | 230E | 4304735747 | 15165 | 1 | GW | P | NWNE | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-17C | 17 | 100S | 230E | 4304738237 | 16585 | 1 | GW | P | NENW | | 1 | WSMVD | P | UTU-37355 | N2995 |
| BONANZA 1023-17D3S | 17 | 100S | 230E | 4304750511 | 17943 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-17E2S | 17 | 100S | 230E | 4304750512 | 17944 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-17E3AS | 17 | 100S | 230E | 4304750513 | 17945 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-17E3CS | 17 | 100S | 230E | 4304750514 | 17946 | 1 | GW | P | NENW | D | 1 | WSMVD | P | UTU 37355 | N2995 |
| BONANZA 1023-18G | 18 | 100S | 230E | 4304735621 | 14410 | 1 | GW | P | SWNE | | 1 | WSMVD | P | U-38241 | N2995 |
| BONANZA 1023-18B | 18 | 100S | 230E | 4304735721 | 14395 | 1 | GW | P | NWNE | | 1 | WSMVD | P | U-38421 | N2995 |
| BONANZA 1023-18DX (RIGSKID) | 18 | 100S | 230E | 4304736218 | 14668 | 1 | GW | P | NWNW | | 1 | WSMVD | P | U-38241 | N2995 |
| BONANZA 1023-18A | 18 | 100S | 230E | 4304738243 | 16625 | 1 | GW | P | NENE | | 1 | WSMVD | P | UTU-38421 | N2995 |
| BONANZA 1023-18F | 18 | 100S | 230E | 4304738244 | 16624 | 1 | GW | P | SENW | | 1 | WSMVD | P | UTU-38421 | N2995 |
| BONANZA 1023-18E | 18 | 100S | 230E | 4304738245 | 16645 | 1 | GW | P | SWNW | | 1 | MVRD | P | UTU-38421 | N2995 |
| BONANZA 1023-18C | 18 | 100S | 230E | 4304738246 | 16734 | 1 | GW | P | NENW | | 1 | MVRD | P | UTU-38421 | N2995 |
| BONANZA 1023-18G-1 | 18 | 100S | 230E | 4304738916 | 17135 | 1 | GW | P | SWNE | | 1 | WSMVD | P | UTU-38421 | N2995 |
| BONANZA 1023-18D3AS | 18 | 100S | 230E | 4304750448 | 17498 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18D3DS | 18 | 100S | 230E | 4304750449 | 17499 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18E2DS | 18 | 100S | 230E | 4304750450 | 17497 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18E3AS | 18 | 100S | 230E | 4304750451 | 17496 | 1 | GW | P | SENW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18L2S | 18 | 100S | 230E | 4304750520 | 18111 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18L3S | 18 | 100S | 230E | 4304750521 | 18110 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18K3AS | 18 | 100S | 230E | 4304751061 | 18112 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18K3BS | 18 | 100S | 230E | 4304751063 | 18113 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18M2AS | 18 | 100S | 230E | 4304751064 | 18117 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18M2DS | 18 | 100S | 230E | 4304751065 | 18116 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18N2AS | 18 | 100S | 230E | 4304751066 | 18114 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-18N2DS | 18 | 100S | 230E | 4304751067 | 18115 | 1 | GW | P | SWNW | D | 1 | WSMVD | P | UTU 38421 | N2995 |
| BONANZA 1023-10F | 10 | 100S | 230E | 4304738225 | 16565 | | GW | P | SENW | | | MVRD | P | UTU 72028 | N2995 |
| BONANZA 1023-6D1AS | 6 | 100S | 230E | 4304751450 | 18320 | | GW | P | NENW | D | | WSMVD | P | UTU 38419 | N2995 |
| BONANZA 1023-6C1CS | 6 | 100S | 230E | 4304751448 | 18319 | | GW | | NENW | D | | | | UTU 38419 | N2995 |
| BONANZA 1023-6D3AS | 6 | 100S | 230E | 4304751452 | 18317 | | GW | P | NENW | D | | WSMVD | P | UTU 38419 | N2995 |

Sundry Number: 39582 API Well Number: 43047504540000

**FEDERAL APPROVAL OF THIS ACTION IS NECESSARY**

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:**
UTU 38419

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:**
PONDEROSA

**1. TYPE OF WELL**
Gas Well

**8. WELL NAME and NUMBER:**
BONANZA 1023-6N1CS

**2. NAME OF OPERATOR:**
KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:**
43047504540000

**3. ADDRESS OF OPERATOR:**
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

**PHONE NUMBER:**
720 929-6526

**9. FIELD and POOL or WILDCAT:**
NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:**
UINTAH

**STATE:**
UTAH

**11.**
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start:<br>7/2/2013 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ✓ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

Please find the following water shut off procedure: The operator RIH to 8,684 ft., set 4- 1/2 in. CIBP. The operator then will pull out of hole 10 ft. and break circulation with fresh water.

**Accepted by the Utah Division of Oil, Gas and Mining**

**Date:** July 03, 2013

**By:** Dark K Quist

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Matthew P Wold | 720 929-6993 | Regulatory Analyst I |
| **SIGNATURE** | | **DATE** |
| N/A | | 7/2/2013 |

RECEIVED: Jul. 02, 2013

# Greater Natural Buttes Unit

# BONANZA 1023-6N1CS

## PLUGBACK PROCEDURE
### MESAVERDE FORMATION

**DATE:** 3/27/13
**AFE#:** ??
**API#:** 4304750454
**USER ID:** MRX575 (Frac Invoices Only)

COMPLETIONS ENGINEER: **Kevin Lammers, Denver, CO**
**(720) 929-6109 (Office)**
**(713) 829-7143 (Cell)**

**REMEMBER SAFETY FIRST!**

RECEIVED: Jul. 02, 2013

**Name:** **Bonanza 1023-6N1CS**
**Location:** **NWSW Sec 6 T10S R23E**
**LAT:** 39.975144 **LONG:** 109.376039 **COORDINATE:** *NAD27 (Surface Location)*
**Uintah County, UT**
**Date:** **3/27/13**

**ELEVATIONS:** 5144' GL 5158' KB *Frac Registry TVD: 8495'*

**TOTAL DEPTH:** 8800' **PBTD:** 8749'
**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 1920'
**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 BTC @ 8789'
Marker Joint **6255-6276**'

**TUBULAR PROPERTIES:**

| | BURST (psi) | COLLAPSE (psi) | DRIFT DIA. (in.) | CAPACITIES (bbl/ft) | (gal/ft) |
|---|---|---|---|---|---|
| 2 3/8" 4.7# L-80 tbg | 11,200 | 11,780 | 1.901" | 0.00387 | 0.1624 |
| 4 ½" 11.6# I-80 (See above) | 7780 | 6350 | 3.875" | 0.0155 | 0.6528 |
| 4 ½" 11.6# P-110 | 10691 | 7580 | 3.875" | 0.0155 | 0.6528 |
| 2 3/8" by 4 ½" Annulus | | | | 0.0101 | 0.4227 |

**TOPS:** **BOTTOMS:**

1116' Green River Top
1377' Bird's Nest Top
1738' Mahogany Top
4313' Wasatch Top 6542' Wasatch Bottom
6542' Mesaverde Top 8800' Mesaverde Bottom (TD)

**T.O.C. @** 600'
**Hydraulic Isolation @** 2980' Cutters CBL- 6/7/10

**GENERAL:**

- Procedure calls for **1** CIBP's (**10,000** psi) .
- Originally completed on 7/12/10
- Originally recompleted on 7/2/11
- Tubing landed @ 8430'
- **Plug calculations are based on Class G cement with No Bentonite. Adjust the cement slurry volumes if a different cement type will be used.**



RECEIVED: Jul. 02, 2013

**Existing Perforations (from OpenWells):**

PERFORATIONS

| Formation | Zone | Top | Btm | spf | Shots | Date | Reason | Comments | Producing |
|---|---|---|---|---|---|---|---|---|---|
| WASATCH | | 5498 | 5500 | 4 | 8 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 5622 | 5625 | 4 | 12 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6014 | 6016 | 4 | 8 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6048 | 6050 | 4 | 8 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6186 | 6188 | 4 | 8 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6288 | 6289 | 3 | 3 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6327 | 6328 | 3 | 3 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6373 | 6375 | 3 | 6 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6497 | 6498 | 3 | 3 | 06/28/2011 | PRODUCTION | | Yes |
| WASATCH | | 6536 | 6538 | 3 | 6 | 06/28/2011 | PRODUCTION | | Yes |
| MESAVERDE | | 6684 | 6688 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 6782 | 6788 | 4 | 24 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7232 | 7234 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7276 | 7280 | 3 | 12 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7324 | 7326 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7360 | 7364 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7506 | 7508 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7530 | 7532 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7604 | 7606 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7667 | 7669 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7706 | 7710 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7818 | 7822 | 3 | 12 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7840 | 7842 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7902 | 7904 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 7914 | 7918 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8072 | 8076 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8104 | 8110 | 4 | 24 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8306 | 8310 | 4 | 16 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8334 | 8340 | 4 | 24 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8434 | 8436 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8492 | 8494 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8525 | 8528 | 3 | 9 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8548 | 8550 | 4 | 8 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8561 | 8564 | 4 | 12 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8704 | 8706 | 3 | 6 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8720 | 8724 | 3 | 12 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8742 | 8746 | 3 | 12 | 07/12/2010 | PRODUCTION | | Yes |
| MESAVERDE | | 8763 | 8766 | 4 | 12 | 07/12/2010 | PRODUCTION | | Yes |

**Relevant History:**

4/8/2010: New drill, cemented w/ Class G Premium Lite (Lead) and Class G 50/50 POZ-Mix (Tail).

7/12/2010: Completed in Mesaverde Formation (see perfs above)

7/2/2011: Recompleted in Wasatch Formation (see perfs above)

2/7/2013: (Most Recent Slickline Report): Could not trip plunger rih with JDC stacked out at 7153 pooh did not have fish rih with scratcher stacked out at 7153 beat down got to 8146 could not beat further pooh could not blow tubing rih with JDC stacked out at 8146 beat down pooh had plunger rih with JDC stacked out at 8146 beat down pooh did not have fish rih with scratcher stacked out at 8146 beat down could not get past



RECEIVED: Jul. 02, 2013

8146 pooh could not blow tubing equalized well rih wtih JDC stacked out at 8146 beat down pooh did not have fish JDC was packed with scale returned well to sales

**H2S History:**

| Production Date | Gas (avg mcf/day) | Water (avg bbl/day) | Oil (avg bbl/day) | LGR (bbl/Mmcf) | Max H2S Seperator (ppm) |
|---|---|---|---|---|---|
| 2/28/2013 | 8.93 | 2.89 | 0.06 | 330.60 | |
| 1/31/2013 | 194.42 | 27.32 | 0.03 | 140.70 | 19.00 |
| 12/31/2012 | 191.84 | 24.61 | 0.00 | 128.30 | |
| 11/30/2012 | 158.20 | 16.97 | 0.00 | 107.25 | |
| 10/31/2012 | 212.35 | 23.48 | 0.00 | 110.59 | 20.00 |
| 9/30/2012 | 152.07 | 18.30 | 0.77 | 125.38 | 0.00 |
| 8/31/2012 | 218.68 | 21.06 | 0.03 | 96.47 | |
| 7/31/2012 | 249.94 | 22.42 | 0.10 | 90.09 | |
| 6/30/2012 | 285.70 | 21.60 | 0.07 | 75.84 | 0.00 |
| 5/31/2012 | 143.10 | 16.55 | 0.65 | 120.15 | |
| 4/30/2012 | 171.87 | 25.77 | 5.10 | 179.60 | 1.00 |
| 3/31/2012 | 119.13 | 12.87 | 0.00 | 108.04 | 3.00 |
| 2/29/2012 | 264.10 | 23.69 | 0.00 | 89.70 | 0.00 |
| 1/31/2012 | 386.77 | 32.35 | 5.16 | 97.00 | 0.00 |
| 12/31/2011 | 511.06 | 37.26 | 0.00 | 72.90 | 0.00 |
| 11/30/2011 | 583.07 | 44.40 | 2.83 | 81.01 | 0.00 |
| 10/31/2011 | 635.39 | 50.06 | 3.16 | 83.77 | 42.00 |
| 9/30/2011 | 598.70 | 60.03 | 0.03 | 100.33 | 13.00 |
| 8/31/2011 | 763.00 | 45.65 | 1.48 | 61.77 | 9.00 |
| 7/31/2011 | 519.61 | 13.58 | 0.26 | 26.63 | 11.00 |
| 6/30/2011 | 319.93 | 19.37 | 0.60 | 62.41 | 18.00 |
| 5/31/2011 | 515.13 | 42.19 | 2.81 | 87.36 | 21.00 |
| 4/30/2011 | 569.80 | 48.13 | 0.00 | 84.47 | 20.00 |
| 3/31/2011 | 633.90 | 64.06 | 0.16 | 101.32 | 9.00 |
| 2/28/2011 | 690.89 | 63.50 | 1.43 | 93.98 | 0.00 |
| 1/31/2011 | 792.52 | 81.97 | 2.10 | 106.07 | 20.00 |
| 12/31/2010 | 758.29 | 85.32 | 2.68 | 116.05 | 13.00 |
| 11/30/2010 | 861.20 | 95.63 | 2.30 | 113.72 | |
| 10/31/2010 | 802.16 | 93.48 | 3.55 | 120.96 | 9.00 |
| 9/30/2010 | 1036.80 | 123.97 | 5.77 | 125.13 | 3.00 |
| 8/31/2010 | 1599.84 | 35.00 | 15.26 | 31.41 | |
| 7/31/2010 | 742.06 | 0.00 | 0.00 | 0.00 | |



RECEIVED: Jul. 02, 2013

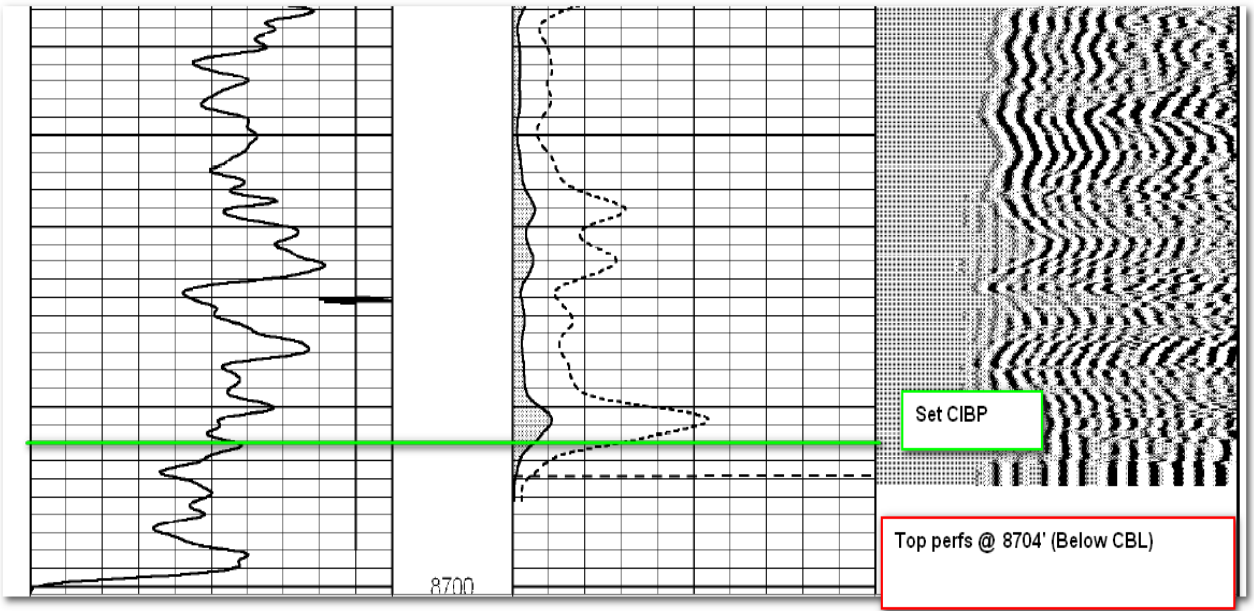
**PROCEDURE:**

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU and test BOP.

2. POOH and **scan tubing**, once first joint fails (+30% wall loss), break every connection and visually inspect for pins and upsets from corrosion. L/D any suspect joints.

3. Collect and submit solid sample to engineer if applicable.

4. **PLUG - ISOLATE MESAVERDE PERFORATIONS (8704' – 8766'):** RIH W/ 4 ½" CIBP. SET @ ~ 8684' (~20' above top perfs). Release CIBP, PUH 10', break circulation with fresh water. Pressure test casing to 6200 psi. Inform engineering if it doesn't test. Displace a minimum of **7 SX/ 0.8 BBL/ 4.4 CUFT** of cement on top of plug. PUH above TOC (~8634', equivalent to 50' COVERAGE). REVERSE CIRCULATE W/ TREATED FRESH WATER.




5. Please confirm BHA contains a seat nipple. RIH and land EOT. Broach tubing with 1.910" broach.

6. ND BOPs and NUWH

7. Notify CDC and foremen when well is ready for production

**For design questions, please call**
**Kevin Lammers, Denver, CO**
**(720) 929-6109 (Office)**
**(713) 829-7143 (Cell)**

**For field implementation questions, please call**
**Jeff Samuels, Vernal, UT**
**(435)-781-7046 (Office)**



RECEIVED: Jul. 02, 2013

Form 3160-3
(August 2007)

RECEIVED
JUN 02 2009
BLM

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: UTU38419

6. If Indian, Allottee or Tribe Name:

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.:

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.: BONANZA 1023-6N1CS

2. Name of Operator: KERR MCGEE OIL & GAS ONSHORE LP
Contact: KATHY SCHNEEBECK DULNOAN
Mail: kathy.schneebeckdulnoan@anadarko.com

9. API Well No.: 43 047 50454

3a. Address: 1368 SOUTH 1200 EAST
VERNAL, UT 84078

3b. Phone No. (include area code)
Ph: 720-929-6007
Fx: 720-929-7007

10. Field and Pool, or Exploratory: NATURAL BUTTES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: Lot 6 1550FSL 739FWL 39.97491 N Lat, 109.37618 W Lon

At proposed prod. zone: SESW 955FSL 2145FWL 39.97330 N Lat, 109.37117 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area: Sec 6 T10S R23E Mer SLB
SME: BLM

14. Distance in miles and direction from nearest town or post office*: APPROXIMATELY 25 MILES SOUTHEAST OF OURAY, UT

12. County or Parish: UINTAH

13. State: UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): APPROXIMATELY 955' TO LEASE LINE

16. No. of Acres in Lease: 516.80

17. Spacing Unit dedicated to this well: 316.80

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.: APPROXIMATELY 350'

19. Proposed Depth: 8840 MD
8400 TVD

20. BLM/BIA Bond No. on file: WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.: 5144 GL

22. Approximate date work will start: 06/26/2009

23. Estimated duration: 60-90 DAYS

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature: (Electronic Submission)
Name (Printed/Typed): KATHY SCHNEEBECK DULNOAN Ph: 720-929-6007
Date: 06/01/2009

Title: STAFF REGULATORY ANALYST

Approved by (Signature): Stephanie J Howard
Name (Printed/Typed): Stephanie J Howard
Date: 12/15/09

Title: Assistant Field Manager
Acting Lands & Mineral Resources
Office: VERNAL FIELD OFFICE

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**Additional Operator Remarks (see next page)**

**Electronic Submission #70385 verified by the BLM Well Information System**
**For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**
**Committed to AFMSS for processing by GAIL JENKINS on 06/03/2009 (09GXJ4693AE)**

**NOTICE OF APPROVAL**

RECEIVED
DEC 23 2009
DIV. OF OIL, GAS & MINING

UDOGM

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

09SXS0525A NOS: 01-30-2009

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-440(

## *CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL*

| | | | |
|---|---|---|---|
| **Company:** | **Kerr McGee Oil & Gas Onshore** | **Location:** | **Lot 6, Sec 6, T10S, R23E (S) SESW,Sec 6, T10S, R23E (B)** |
| **Well No:** | **Bonanza 1023-6N1CS** | **Lease No:** | **UTU-38419** |
| **API No:** | **43-047-50454** | **Agreement:** | **N/A** |

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit was processed using a 390 CX tied to NEPA approved 02/05/07. Therefore, this permit is approved for a two (2) year period OR until lease expiration OR the well must be spud by 02/05/12 (5 years from the NEPA approval date), whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

## NOTIFICATION REQUIREMENTS

| | | |
|---|---|---|
| Location Construction<br>(Notify Environmental Scientist) | - | Forty-Eight (48) hours prior to construction of location and access roads. |
| Location Completion<br>(Notify Environmental Scientist) | - | Prior to moving on the drilling rig. |
| Spud Notice<br>(Notify Petroleum Engineer) | - | Twenty-Four (24) hours prior to spudding the well. |
| Casing String & Cementing<br>(Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov. |
| BOP & Related Equipment Tests<br>(Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to initiating pressure tests. |
| First Production Notice<br>(Notify Petroleum Engineer) | - | Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days. |

## *SURFACE USE PROGRAM*
## *CONDITIONS OF APPROVAL (COAs)*

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of $NO_x$ per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of $NO_x$ per horsepower-hour.

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.

- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**SITE SPECIFIC COAs:**
**DOI-BLM-UT-G010-2009-0606-SCX**

- The following seed mix will be used for Interim Reclamation

Interim Reclamation seed mix

| | | |
|---|---|---|
| Ephraim crested wheatgrass | *Agropyron cristatum v. Epharim* | 1 lbs. /acre |
| bottlebrush squirreltail | *Elymus elymoides* | 1 lbs. /acre |
| Siberian wheatgrass | *Agropyron fragile* | 1 lbs. /acre |
| western wheatgrass | *Agropyron smithii* | 1 lbs. /acre |
| scarlet globemallow | *Spaeralcea coccinea* | 1 lbs. /acre |
| shadscale | *Atriplex confertifolia* | 2 lbs. /acre |
| fourwing saltbush | *Atriplex canescens* | 2 lbs. /acre |

Seed shall be applied with a rangeland drill, unless topography and /or rockiness precludes the use of equipment. See shall be applied between August 15 and ground freezing. All see rates are in terms of Pure Live Seed. Operator shall notify the Authorized Officer when seeding has commenced, and shall retain all seed tags.

- The existing topsoil pile will be moved and added to the new topsoil pile on the west side of the well pad.

- The operator will control noxious weeds along the well pad, access road, and the pipeline route by spraying or mechanical removal. On BLM administered land, a Pesticide Use Proposal (PUP) will be submitted and approved prior to the application of herbicides or pesticides or possibly hazardous chemicals.

- As agreed upon the onsite the pit will be lined with double felt.

## *DOWNHOLE PROGRAM*
## *CONDITIONS OF APPROVAL (COAs)*

**SITE SPECIFIC DOWNHOLE COAs:**

- Well location TD bottom footage hole location information on the completion form 3160-4 Well Completion or Recompletion Report and Log shall match and be in agreement with the (from the) actual drilling directional survey well departure values for the TD bottom hole location.

- A copy of the as drilled directional survey shall be submitted to the BLM Vernal Field Office. Submit the MWD-GR survey from the directional/horizontal drilling operations, hard copy or electronically.

- The operator must notify any active gilsonite operation located within 2 miles of the location 48 hours prior to any surface blasting for this well.

- Conductor casing shall be set into competent formation.



  toc_1200_operDrlgPlan#4
  CsgSurf_set_2100
  (oper Birds Nest Aquifer approx 1400 ft )
  KerrMcGee apd_coa Downhole

- Surface casing cement shall be brought up and into the surface. Top of Cmnt is to reach surf.

- Production casing cement shall be brought up and into the surface casing. Production casing minimum cement top is 1200 ft. The minimum cement top is approximately 0800 ft above the surface casing shoe.
  Cmnt Top (TOC) standard will place cmnt behind casing across formation lost circulation zone, Birds Nest Zone.
  Surface casing setting depth stated in APD is 2100 ft (approximately).
  COA specification fulfills operators performance standard stated in APD (where operators toc is calc'd with an excess to reach surface).

- Operator is to notify BLM Vernal Field Office and active gilsonite mining operator (or lease holder) located within a 2 mile radius, 48 hours prior to pad explosives blasting. Well is not close to gilsonite vein, but on trend to gilisonite vein deposits.

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

- Drilling plan specifics and practices are referenced in the Kerr McGee Oil & Gas Standard Operating Procedures (SOP version: July 28, 2008). The operators drilling plan items 3 to 9 reference the SOP. Kerr McGee shall adhere to the referenced requirements in the SOP.
  Kerr McGee and their contractors shall adhere to all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where variances have been granted.

- Covering air/gas drilling operations, requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

- A Gamma Ray well Log shall be run from the well Total Depth to the surface.
  A copy of the Gamma Ray well Log shall be submitted to the BLM Vernal Field Office.

- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 45 feet.
  All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.

- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.

- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.

- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.

- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.

- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

**OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.
    - Well name and number.
    - Well location (¼¼, Sec., Twn, Rng, and P.M.).
    - Date well was placed in a producing status (date of first production for which royalty will be paid).
    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
    - Unit agreement and/or participating area name and number, if applicable.
    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 38419

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**

**7.UNIT or CA AGREEMENT NAME:** PONDEROSA

**1. TYPE OF WELL** Gas Well

**8. WELL NAME and NUMBER:** BONANZA 1023-6N1CS

**2. NAME OF OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**9. API NUMBER:** 43047504540000

**3. ADDRESS OF OPERATOR:** P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6526

**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1550 FSL 0739 FWL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NWSW Section: 06 Township: 10.0S Range: 23.0E Meridian: S

**COUNTY:** UINTAH

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☑ SUBSEQUENT REPORT<br>Date of Work Completion:<br>8/26/2013 | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☑ OTHER | OTHER: Production Enhancement |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

The operator conducted the following workover/wellbore cleanout on the subject well on 8/26/2013. Please see the attached chronological well history for details. Thank you.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
January 08, 2014

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Teena Paulo | 720 929-6236 | Staff Regulatory Specialist |
| **SIGNATURE** | | **DATE** |
| N/A | | 12/2/2013 |

RECEIVED: Dec. 02, 2013

US ROCKIES REGION

## Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS BLUE | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 |
| Event: WELL WORK EXPENSE | Start Date: 8/22/2013 | End Date: 8/26/2013 |
| Active Datum: RKB @5,158.00usft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| 8/22/2013 | 7:00 - 7:15 | 0.25 | MAINT | 48 | | P | | JSA-SAFETY MEETING |
| | 7:15 - 13:00 | 5.75 | MAINT | 30 | A | P | | ROAD RIG TO LOC, MIRU, N/D WH, N/U BOPS, P/U ON TBG OK, R/U SCAN TECH, |
| | 13:00 - 18:00 | 5.00 | MAINT | 31 | I | P | | TOOH W/ 2 3/8" TBG W/ SCAN TBG OUT, FOUND 147 JTS YELLOW BAND AND 116 JTS RED BAND ENDS PITTED LAST 8 JTS HAD SCALE ON OUSIDE OF TBG, BUMPER SPRING IN XN -NIPPLE, SHUT WELL IN, R/D SCAN TECH, SDFN, |
| 8/23/2013 | 7:00 - 7:15 | 0.25 | MAINT | 48 | | P | | JSA-SAFETY MEETING |
| | 7:15 - 8:30 | 1.25 | MAINT | 34 | G | P | | 400# ON WELL BLOWED DN TO TK, R/U CUTTER WIRELINE, RIH W/ 4 1/2" GAUGE RING SET DN @ 8100', R/D WIRELINE, |
| | 8:30 - 12:00 | 3.50 | MAINT | 31 | I | P | | P/U 3 7/8" MILL RIH W/ 2 3/8" TBG, TAG SCALE @ 8107', |
| | 12:00 - 18:00 | 6.00 | MAINT | 44 | D | P | | R/U POWER SWIVEL AND FOAM UNIT, ESTB CIRC W/ FOAM UNIT, CLEAN OUT SCALE FROM 8107' TO 8724', CIRC WELL CLEAN, R/D SWIVEL AND FOAM UNIT, TOOH 20 STANDS TBG SHUT WELL IN,, |
| 8/26/2013 | 7:00 - 7:15 | 0.25 | MAINT | 48 | | P | | HSM, REVIEW RIH & SET CIBP & CMT ON PLUG. |
| | 7:15 - 9:30 | 2.25 | MAINT | 31 | I | P | | BLEW TBG DWN, CONTROL TBG W/ 10 BBLS, POOH 275 JTS. 2-3/8" L-80 TBG, PROD TBG. |
| | 9:30 - 10:30 | 1.00 | MAINT | 34 | G | P | | RU CUTTERS WIRELINE SERVICE, RIH W/ 3.625 G.R.TO 8700', POOH TOOLS. |
| | 10:30 - 11:30 | 1.00 | MAINT | 34 | I | P | | RIH W/ 4-1/2 OWEN 8K CIBP & SET @ 8684', POOH TOOLS. |
| | 11:30 - 14:30 | 3.00 | MAINT | 34 | D | P | | RIH W/ CMT BAILER & DUMPED 6 SKS OF CMT ON TOP OF PLUG, POOH TOOLS, RD CUTTERS WIRELINE SERVICE. |



RECEIVED: Dec. 02, 2013

US ROCKIES REGION

## Operation Summary Report

| | | |
|---|---|---|
| Well: BONANZA 1023-6N1CS BLUE | Spud Conductor: 4/7/2010 | Spud Date: 4/12/2010 |
| Project: UTAH-UINTAH | Site: BONANZA 1023-6L PAD | Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 |
| Event: WELL WORK EXPENSE | Start Date: 8/22/2013 | End Date: 8/26/2013 |
| Active Datum: RKB @5,158.00usft (above Mean Sea Level) | UWI: NW/SW/0/10/S/23/E/6/0/0/6/PM/S/1,550.00/W/0/739.00/0/0 | |

| Date | Time Start-End | Duration (hr) | Phase | Code | Sub Code | P/U | MD From (usft) | Operation |
|---|---|---|---|---|---|---|---|---|
| | 14:30 - 19:00 | 4.50 | MAINT | 31 | I | P | | LD 16 JTS. 2-3/8" L-80 TBG, PU 1.875 X 1.78 LSN, & RIH 130 JTS. 2-3/8" L-80 TBG, RU SWAB EQUIPMENT, RIH W/ 1.910 BROACH & BROACH TBG TO SN, POOH SWAB EQUIPMENT, RIH 129 JTS. 2-3/8" L-80 TBG, LAND TBG W/ 259 JTS. EOT @ 8200.41', RU SWAB EQUIPMENT, RIH W/ 1.910 BROACH & BROACH TBG TO SN, POOH SWAB EQUIPMENT, RD FLOOR & TBG EQUIPMENT, ND BOP'S, NU WH, CLEAN LOCATION,RDMO, WILL MOVE TO THE BONANZA 1023-8L3DS IN THE MORNING.<br><br>TBG DETAIL:<br><br>KB----------<br>-----14'<br>HANGER----------<br>----.83<br>259 JTS. 2-3/8" L-80<br>TBG----------8184.24<br>1.875 X 1.78<br>LSN----------1.34<br>EOT@----------8<br>200.41<br>WLTR. 177 BBLS.<br>TOP PERF @ 5,498'<br>BTM PERF @ 8,564'<br>NOTE: SET 4-1/2 OWEN 8K CIBP @ 8684' W/ 6 SKS CMT ON TOP OF PLUG. |